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ORIGINAL ARTICLES.

CHOREA.

Read in the Section on Diseases of Children, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

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In calling your attention to the subject of my paper, I am aware that chorea is not exclusively a disease of childhood, nor one that may not find its victims in all ages of life, even to the second childhood of extreme senility; still, its manifestations in the majority of instances are so confined to the years of minority that it has taken rank as a disorder of the earlier periods of life. Nor am I less aware that there is perhaps no malady to which humanity is subject that has received more attention than this. Its literature is so full and voluminous, exists in so many languages, and extends over so great length of time, even from the beginning of medical observations, that it may be considered one of the earliest pathological crosses we have been called upon to bear and to consider. At one time ranked as purely psychical in character, it has again received the reputation of being a plainly physical expression of a local injury to clearly defined cerebral tissue. In the search for its character and origin it has seemed truly to be the ignis fatuus of the medical world, now almost within our grasp, and the next observation as far away as ever; dancing, as its name implies, all over the field of professional thought and speculation—having its primary source in the borderland of the unknowable—relegated for ages to the regions of psychological pathology the consideration and investigation of which was often undertaken at the risk of life or excommunication, it has proven so fascinating a topic as to command attention and careful study from the most thoughtful and observant of every generation.

Judging from the results of philological investigations the disease has always, at least until quite recently, been considered either psychical or sexual in origin and exhibition. The names of a number of saints have been coupled, as adjectives, with the unrythmical display of muscular contractions facetiously denominated dancing. Its association with sexual abuses and irritations, especially about the age of puberty, has kept alive a popular belief as to its phallic source, a belief which perhaps has a larger foundation in fact than many another common notion, and which seems to be receiving much confirmation in the latest researches. Lest I might be misunderstood, perhaps I had better explain at this point what I mean by the last suggestion. Points and tracts of irritation are almost universally found in the basal ganglia of the cerebrum, in the genito-urinary tract of the cord, and near the seventh cervical vertebral region of the cord, all together suggesting marked irritation of the sexual system either as cause or effect, and in either case capable, through the reflexes, of sustaining an irregular motor action such as we see in this disease, the length of such sustention depending largely upon the moral and medicinal forces brought to bear upon each individual case. The natural history of such cases as can be properly estimated and honestly studied seems to go far to establish the correctness of this view in at least a large number of instances.

This thought will be reverted to when considering the etiology of the malady. So fully has the life history of the disease been given by various brilliant writers, both professional and secular; so clearly defined and beautifully described have been the symptoms, diagnosis and prognosis, that it would be an act of supererogation on my part to attempt an elaboration of these points in a practical paper such as I wish to lay before you. Several eminent writers will occur to you as being high authority on these divisions, and as having left little or nothing unsaid; so that, referring you to them, I shall only mention such items under these headings as may be necessary to make clearer the short argument, with its conclusions, to which I ask your attention. Several theories in etiology have been advanced, but none thus far covering sufficient ground to prove a satisfactory solution of the various problems embraced in a discussion of the disorder. The following are given by different authors as the probable character of its causes—I give them in the order of their antiquity: Psychical, neurotic, embolic, cardiac (which is really a subdivision of the preceding), and rheumatic. Of these perhaps the embolic

has been the most fascinating theory of recent dates, and has attracted the attention of many of our best writers, who for a long time had matters their own way, until Dickinson's careful and conscientious anatomical researches rendered the occupation of this line of thought no longer tenable as a sole explanation of its factors in etiology. That inheritance has much to do in the matter is now no mere suspicion.

We find a certain class of cases arising in adults, and evidently appearing at a certain point in senile changes, which are parts of family histories. The New England cases on record will illustrate these. But that inherited physiological conditions, conditions bordering upon if not a part of degenerative processes, are at the base of a very large proportion of the cases of this disease, there would seem to be little doubt. And it is this fact with its obscure accompaniments, so difficult of investigation and analysis, that has made the credence in psychic forces so slow in disappearing from the popular mind. In our search for post-mortem appearances we have looked for those gross conditions palpable to the unaided senses, and we have been puzzled to find nothing at all commensurate with the symptoms we have combated during life. A few of the coarser evidences of congestion, with the necessary physical changes of appearance and function in the basal ganglia, and especially in the corpora striata, gave rise for a time to the preponderance of belief that organic changes in the latter were the chief causes of the morbid manifestations met with during life, and extremely plausible were the arguments brought forward to sustain such view; so convincing, in fact, that their application to the pathological conditions found in later investigations will be almost a matter of course.

While the theorizing of late French writers has shown, or rather suggested, the apparent relationship between hysteria above and epilepsy below as connected by the intermediate disorder of chorea, and while the latter seemed likely to be lost as a distinct affection in the subdivisions of the other complaints, the various "tics" and neuroses, the scalpel and microscope and patience of Dickinson has laid before us the facts connected with the pathological state of the entire central nervous structures as placed upon exhibition by fatal attacks of the malady now under consideration. According to Dickinson and those who have since had the opportunity of verifying his observations, there is a state of general hyperæmia, varying only in degree from the faintest trace of congestion to actual or immediately threatened disorganization in a large proportion of the gray matter, extending from the base of the cerebrum to the lower or sacral portions of the spinal cord. In the cord this especially involves the posterior roots, and within the skull the corpora striata, the latter of these being most seriously affected. It is reasonable to believe that in the vast majority of cases of chorea we have only a very slight grade of hyperæmia of these structures, which, under careful management and rest, with nature's tendencies to rally from derangements of all kinds, will certainly recover within a specified time and without any apparent ill results; and that this general, or in many cases local, hyperæmia, with its hyperæsthetic accompaniments, is the only discoverable pathological element for consideration, is a fact seemingly too clear to need other argument for confirmation. Still, to believe that it is the only etiological factor for us to contemplate would indicate a grave and serious error of judgment. The results of post-mortem observations indicate that the disease has its primary origin essentially in atomic errors of nutrition antedating by years, it may be by generations, the patent outbreak which attracts the attention of family and physician.

A very large number in the list of causes of the disease are formal and not efficient, are potential but not primary in their action—*e. g.*, a long walk in the sun or a heated discussion is the active agent in determining an attack of mania, but the true *causes* are other, often obscure and extending over months and years of a previous life whose irregularities of thought and habit may never be known, and can only be surmised from the startling revelation which comes to the social circle and the saddened household as one of its number disappears behind the portals of a hospital for the insane. To carry the illustration a little further, and render still clearer what I have yet to say, were I bold enough to offer another name for chorea, and one, I believe, far more suggestive of its etiological probabilities, I should call it mania musculi—insanity of the muscles—with a primary origin in nutritive changes in the nerve tissues which would necessitate for its full elucidation and proper individual management, in the large majority of cases, a careful investigation of the previous family history "to the third and fourth generation."

The rapid spread of the so-called epidemic forms of the disorder as appearing in the Middle Ages, and more recently in the vagaries of thought and ritualism of various semi- and pseudo-religious sects in England and America, is hardly to be taken into consideration, as this form of neurotic disturbance is more closely allied to hysteria, and involves derangements of the higher nerve structures such as may be entirely absent in the great majority of cases of pure chorea as we now understand it. Still, as these mental and moral absurdities were and are to a great extent the result of influences extending over a great length of time, often in the direct line in succeeding generations, their careful study is worthy of our fullest effort as throwing much light upon both psychoses and neuroses, and all intermediate manifesta-

tions of deranged nerve function. A study of the political, social and religious conditions preceding and accompanying these outbreaks reveals to us a mental strain affecting a large class of ignorant and half-educated people, trained in none of the principles of self-control, and inheriting crude ambitions and spiritual aspirations utterly hopeless of fulfilment in any existence of which a healthy mind can conceive. Many an organization of to-day in the various fields of human effort has its origin and possible continuance in the unfortunate mental condition of those who seem as yet only on the borders of actual disease, but whose minute nerve tissues are abnormal in their action. The communist and anarchist in politics and society; the noisy, ranting, half-civilized religionist; the statuto-maniac, and the "Christian scientist," are all illustrations of the nervo-mental irregularities in question, and will all bear scientific investigation for the facts they furnish as bearing upon allied conditions of well established professional importance, and as illustrating the influence of inheritance and the pitiful struggle of degenerating organisms in their despairing battle along the lines of the unyielding law of the "survival of the fittest," a law the principles of which, in its application to the further propagation of our race, is becoming of more vital importance to each succeeding generation.

An intemperate, a syphilitic, a licentious, a passionate ancestor will lay the foundation in atomic changes in the nutrition of the finer forms of tissue which renders a subsequent generation especially disabled from resisting the degenerative processes which may be inaugurated by a hundred active agencies lying in the way of every human life. The harrass and the worry of dismantled hopes, disappointed ambitions, political, domestic, and commercial failures, all conduce to the same end in the establishment of a substratum of physical error upon which to see developed the vagaries of the various psychoses, neuroses, and still grosser aberrations of evolution. By such full elaboration of this line of thought as is entirely beyond the province of and time allotted to this paper, we will be enabled to join together the numerous etiological views, and comprehend the correctness of the application from individual positions of observation, and the incorrectness of the claim that any *one* view is capable of satisfying the requirements demanded in a solution of the difficulties in the way of a full etiological settlement of the perplexing study before us.

We thus learn that the foundations for the disease, the possibilites of its development, are laid and established, in most cases, in the generations preceding the one in which its manifestation is made apparent; and that, with the endowment thus received from ancestral accumulations of abnormal nutritions, very slight are the causes which may finally rupture the ever strained relations between the guiding thought and the executive will which is loosened in its moorings; and thus a rheumatism, with all its pathological possibilities in cardiac changes, embolic contingencies and nerve degenerations, becomes an active factor in the development of a form of choreic display. The same may be said of a malaria in its manifold expositions, some of which will even go so far as to determine types of actual alienation, as seen especially in the forms of cyclical insanity. The harrass and mental worry connected with many of the unfortunate features of our modern school system is a prolific exciting cause of a very large number of the cases now occurring, one writer stating that 20 per cent. of the school children in New York City are affected more or less with the disorder. The torture of companions and playmates, the consciousness of injustice and miscomprehension—for we must remember that most of these cases are in children who are previously over-sensitive and acutely alive to the consciousness of some personal peculiarity or characteristic variation—the reflex irritations of virile development and sexual congestions; anything, in fact, which will unfavorably impress a nervous system in which there already exists a congenital or acquired disarrangement of the ultimate molecular constituents which need not be disorganization nor even marked hyperæsthesia, which are far more likely to result in pronounced dementia or acute mania.

That a very close relationship exists between this and some other diseases there seems little doubt. Eczema and chorea are very often coexisting or interchangeable in exhibit. So is rheumatism, and that in a very peculiar way, the chorea alternating with the high temperature of the more acute types of the rheumatism—and this in the cases where we might often fear in the midst of the exalted pyrexia to see a development of convulsions, to which extent I have occasionally witnessed the advance of the nerve disturbance. Epilepsy, hysteria, the *tics*—are all more or less related to chorea, while it is found to complicate or be associated with a large number of diseases, either by accident or through the incidental influences of nerve degeneration; for the disorder is essentially one of exhaustion and irritation of nerve substance, and brought into active display by whatever disturbs the molecular balances.

Perhaps its most dangerous complication is pregnancy, but as that is beyond the province of this Section, I simply mention it as an illustration of the rarity of fatal consequences as the disease occurs in childhood, and for the suggestion the fact contains as to the foundation of the disorder in an inheritance which tends to a discontinuance in this connection of further race, or rather family permanence.

Relapses are very common, especially in one or two years, and have their origin perhaps more

frequently in fright or great excitement than anything else.

I believe that, in our changeable climate especially, the disorder is often associated with, if not many times dependent upon the nerve congestions and irritations accompanying nephritic disorders. In several cases of enuresis, when the annoyance was relieved and a partial suppression of urine obtained, the result has been followed by the development of choreic symptoms which promptly disappeared upon a return of the incontinence. Knowing the nervous disturbance which often accompanies the high arterial tension caused by the inactive kidney, I have conceived the idea that many cases of chorea may be dependent upon a state of subacute (if I may use the term) urea poisoning, sudden in development and temporary in continuance. The analysis of a number of cases rather confirms me in such belief, *e. g.*, chorea is a very common sequela of scarlatina, and a marked attendant of chronic Bright's disease, as illustrated in a case I now have under observation.

The disorder is said to be very rare in negroes, some writers claiming their complete immunity, and in two or three favored localities of the torrid zone the disease is unknown. Why this is the case is unknown, nor is the usual explanation of the lower grade of intellectual development entirely worthy of consideration, as the disease almost certainly occurs in the conditions of retrogression and "reversal to original types," not, as a rule, in the strong constitutions and vigorous mentalities of the victors in the advancing lines of progress. I should be much more inclined to believe that in the exempt races there is an undiscovered something in the regions of the corpora striata, the parta perforata, the gray matter generally, or their reflex connections, which made these people unimpressible and invulnerable in disorders containing a marked psychic element, and set them apart as distinct from the white race as is the donkey from the horse—not a lower people, but a distinct type of evolution. But then, neither anthropology nor ethnology is the subject-matter of this paper.

The terminations of chorea, except in pregnancy, are almost invariably favorable, the patient being restored to his usual health in a few weeks, and only requiring that care and consideration afterward which in all well regulated families is a result of the discovery of a weak or tainted spot in the special breed. The weak places are to be strengthened, the tainted ones to be cleaned, the family life and general environment often totally changed, and such crossing made in future propagations as to secure to succeeding generations a clearer blood and a stronger brain. The possibly permanent amyloid or fatty changes in the elements of the large central ganglia are such as to justify this view and this advice, especially as we meet with so many cases followed by a permanent nervousness only too suggestive of those early senile changes which make the optimist look grave and reconsider the correctness of his positions. As illustrative cases, and to more clearly define some of the points I wish to especially emphasize, I offer you, in brief, the following:

Case 1.—Age 1 day. Marked left unilateral chorea. Nurse said she noticed it when she first dressed the baby after birth. I had observed some irregular movements while tying, and afterward in dressing the cord, but gave it no attention, as the movements of all, or almost all newborn babies are choreic in manner, although not in character. The sex is male. For five days the movements grew rapidly worse, involving both sides and being almost continuous, after which a steady subsidence of all symptoms took place, the child recovering entirely in two weeks, and remaining so as yet, *i. e.*, so far as the chorea is concerned. Its maternal grandparent is a dipsomaniac, its father a syphilitic, and its mother a physical wreck from excessive childbearing. One of its brothers died at 4 years of cardiac mitral disease, a second died in convulsions, a third has an obstinate tetter, and *this* child will probably die during the coming summer of failure of nutrition in some form or other. The family have moved to another county, but I shall keep them under observation.

Case 2.—Girl, æt. 10 years; thin, wiyr, neurotic from birth. Had general chorea, especially manifest in lower extremities—a regular dancer, in fact. Is quick in all her muscular movements and bright in speech, but slow to learn at school. Disease came on gradually, lasted several weeks, and seemed to get well under treatment, when a relapse occurred, and six weeks was required to control the case. She is now quite well, but gets very nervous under the slightest observation. Her maternal grandparents died of obscure disorders illy defined as "consumption," her mother is suffering from an inherited taint unknown to herself, but readily defined by her medical attendant. The mother is very neurotic. The father's mother died ef tuberculosis, and the father is very subject to "rheumatism." There is no cardiac disorder in the patient. The families on both sides are highly neurotic in character and several of them "queer," two uncles of the patient (maternal) having committed suicide, and almost all the immediate relatives having but one child if any, most of them having none.

Case 3.—Female, æt. 16, well-formed and plump, but mentally not strong. Very sweet disposition, but lazy and idle. Marked tendency to sexual excitation. Heart normal, other organs normal. Active cause of attack, fright. This girl was a tough case, resisting the united efforts of the practitioners of several "schools" for several months. Coming into my hands, I gave her no medicine, gave her full nourishment, outdoor

exercise, and brought high moral influences to bear upon her. She speedily recovered, but will always be a little "weak-minded." Her father is a "crank," his father ditto; his mother has been a chronic invalid for years, a "nervous failure." The patient's mother is a plump, healthy woman with no moral sense—little idea of right and wrong; her grandfather died of "consumption" venereal in origin, and her grandmother is a town gossip. Two brothers are dipsomaniacs. The patient's brother is a fit subject for the "home for feeble-minded."

Case 4.—Female, æt. 15; nice-looking, healthy appearing girl generally. Had a mitral cardiac murmur, general cardiac hypertrophy. General chorea, more marked on left side. Very anæmic when presented for treatment. Active cause of disease, sexual annoyance from a follower she did not like. She had menstruated but three months before the attack of chorea. Her environment was not conducive to an elevated grade of morality, and she was somewhat disinclined to engage in the occupation of her associates. Owing to the continued action of the exciting causes, her medical man made a failure and she was sent to me. I had her taken to the home of distant friends where everything was changed, and a few weeks' care, kindness and medication completely restored her to excellent ordinary health. In this case the father is a common drunkard, the mother worse, and a neurotic, one son a dipsomaniac, and every member of the family "off" in morals and health. The grandparents are unknown, if they ever knowingly existed.

Now I offer these as mere types of extreme cases to illustrate points in the argument. They are cases of medical friends not residing in my own vicinity, but with which I am thoroughly acquainted. In each of these families the retrograde changes are so fully established that the two succeeding generations will probably witness the extinction of the stock, unless in some particular individual who shall fortunately inherit an excess of the better elements, along with an endowment of greater vital force and a proper marriage, a long course of tender care and wise training should lay the substructure for a comparatively new lineage. Of course these illustrations are not offered as types of all families in which chorea is found, but as exemplifications of the final possible consequence of the causes and conditions which permit the development of chorea, and as warnings of the fact that a chorea is a danger signal pointing toward degeneration, and is to be promptly and largely heeded by all in whom is a love of family, and a desire for the perpetuation of line and race.

A few words as to treatment and I am done. I know that ours has been characterized as the "science of observations," and in the past of our profession deductions from seeming facts have been always unsafe. But I think the trouble has been with our "facts." Reasoning by deduction from the *truth* is always safe and productive of the best of results to all mankind in all departments of knowledge, and in no age of the world is this more clearly seen than in our own day and generation; and thus we have only to be sure of our facts, to know certainly "what is truth," and the large knowledge and patient wisdom of the well-trained mind advances safely and triumphantly into the unexplored regions of thought open to human endeavor. If the views suggested in this paper are correct, that the primary causes of chorea are such as may produce a condition involving ultimate degeneration and nervous exhaustion, not necessarily associated with even hyperæmia, but implying a relaxation of the vital forces in the ultimate elements of nerve tissue, and in intimate relation to the disarrangements of malnutrition, we must look for those remedies whose tonic influence, recuperative powers and alterative properties are such as will kindly, gently, but steadily bring strength and order out of the weakness and threatened nervous chaos into which our patient is drifting, by which he is even now invested.

At the head of the list, and endorsed by every writer of any prominence, and I have consulted a very large number, is arsenic. Remembering the remarkable tonic properties of this drug, in medicinal doses, upon many other disorders of the nervous system, its wide usefulness in the neuroses of malnutrition and malassimilation, the advantage taken of its subtle sustaining powers by the experienced guides and dwellers in high altitudes, where long-continued exertion in a rare atmosphere tends to unsettle and demoralize the nervous economies, we are prepared to expect much from its potencies in chorea, and we will not be disappointed in the vast majority of cases, whether we use it as a result of observation, or a consequence of intelligent deduction. It should be given on these general principles, but to *each individual* as the special constitution requires, rapidly pushing the remedy to the point of full tolerance and holding it there as its effects will permit and the case in hand demands, carefully avoiding any toxic manifestation. In extreme and obstinate cases, especially of the inherited senile class reported from New England, the hypodermic administration of the remedy gives better results than any other course. Arsenic may be combined with anything else that the requirements of the case suggest as demanded.

This is one of the disorders in which the Hahnemaniacs have obtained considerable notoriety from the fact that, under the influence of removal from exciting causes, rest, nutritious food and general hygiene, the vast majority of cases of chorea recover without any medication; and as these fellows give "arsenicum" for almost everything, there is accidentally added to good

general management and nursing the most appropriate of remedies. As overwork and worry are powerful factors in determining an attack, rest, as absolute as practicable for a time, to be changed to gentle, passive outdoor exercise as soon as the symptoms commence subsiding, or from the first in mild cases, will always be in order. The various "food tonics," selecting the one most pleasant and best agreeing with the patient, should be given from the first, along with easily digested and highly nutritious food. I have found general daily inunctions and gentle massage excellent adjuvants and as seeming to have a decided influence in abbreviating the period of convalescence, the moderate and healthful stimulation of the peripheral branches having a highly beneficial effect upon the nerve centres. All sources of reflex *irritation* are to be thoroughly removed, and they will sometimes be found where least expected.

Iron, zinc, and the compounds of phosphorus, are very useful as auxiliaries to be introduced for the elimination or control of special symptoms, some of which are nearly always found. The same may be said of the bromides, chloral, ether spray to the spine, hyoscyamus, eserine, nitrite of amyl, skunk cabbage, cimicifuga racemose, cod-liver oil, cocaine, malts, and everything else which has been recommended, for the use of which there might be some temporary demand in an individual case. But every intelligent physician has favorite remedies of his own selection for the combat of symptomatic derangements. Phosphorus uncombined is an irritant and worse than no remedy, but the organic compounds of phosphorus are of great value as true nutrients. In conditions of actual hyperæmia of the cord especially, I have obtained excellent results from ergot, from ipecac in small doses, and from hydrastis, the two latter being remedies of greater potency than is generally known, seeming to act as direct tonics to the spinal and sympathetic nervous systems.

Strychnia, the "nux" of the "homos," is another agent of very great value in the treatment of chorea. The mistake in its administration consists in giving too large a dose. The $\frac{1}{100}$ to the $\frac{1}{500}$ of a grain four times daily is sufficient to commence with in children of 8 or 10 years of age, which dose may be cautiously increased, or more frequently administered, if deemed desirable. In these minute doses it acts as a gentle tonic stimulant to an exhausted, depressed and irritable nervous system, producing no unpleasant effects so far as I have been able to discover. Where rheumatism is a prominent factor, I consider salicin with phytolacca decaudra and guaiaci as the very best treatment in most of cases. Electricity is coming to the front of late as another reliable remedy in the ordinary forms of the disease. It should be used in the form of galvanism and applied with caution to the brain, not using more than 3 milliampères daily, so as to produce an anodyne or soporific effect. Downward galvanization of the cord is the correct method of its application to the spine, where its soothing and steadying influence is often manifest to a remarkable degree. It is a remedy well worthy of trial in all cases the least violent in degree or obstinate in character.

I believe I have brought forward most of the points I wish you to consider. Chorea is largely on the increase, especially in this country, and many of the causes, both remote and active, are within the power of our removal. If I have offered a suggestion that will make our course plainer, and our duty more imperative, I am content, and shall sincerely rejoice if I have been in the least instrumental in throwing an additional glimmer of light upon a subject of so great importance to so many and of such deep interest to myself.

REVERSIVE ANOMALIES IN THE STUDY OF THE NEUROSES.

Read in the Section of Practice of Medicine, at the Thirty-ninth Annual Meeting of the American Medical Association, May 8, 1888.

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In studying the causes of nervous disease we cannot overlook neurotic inheritance and predisposition, and we are obliged to recognize the importance of reversive anomalies not only from a biological, but from a pathological, point of view. We often come across such terms as atavism, and teratology, in the more modern works that deal with the investigation of the nervous functions.

The subject of morphological and physiological retrogression not being well explained in any of the text-books that have come under my notice, it may be a sort of stumbling-block to some, as it was to me, until a short time since, when I sufficiently familiarized myself with enough of the details of the topic to prepare a systematic paper, lately printed in a standard medical publication.

Conservative heredity, displaying itself intermittently in the form and function of progenitor and progeny, has no doubt existed in all organic beings from time immemorial; but the idea does not seem to have taken verbal shape and embodiment until the botanist, Duchesne, created the word atavism to designate one of the proceedings of heredity. The tendency of living beings to reproduce in time a succession of individuals like their parents may manifest itself in a mediate, a *direct*, or a *collateral* form. This phenomenon has for its condition, first, variation; for, if living beings did not offer any variation in their type, heredity would be necessarily and always immediate, and atavism would be confounded with it. But the typical forms modify: in some measure and for some cause, whatever it be, they may transmit these modifications to their descendants.

This transmission operates either on the first generation or in subsequent generations; in the first case there is *immediate* heredity, in the second case *mediate* heredity, or atavism. In its turn atavism may crop out in a direct descendance or in a collateral descendance.

For fear that I am going too fast, and in order to make myself better understood, I must revert to some of the terms that establish the compass and extent of this singular law of intermittency which rules the greater part of the states of life.

Some writers consider it as a force distinct and antagonistic to heredity; others a particular case of heredity—the whole heritage of an anterior production; while others look upon heredity as a generic term of which atavism is a *modality*, that is, a difference in mode or form.

Another writer explains atavism as the reappearance in an individual, or in a group of individuals, of anatomo-physiological characters, positive or negative, which their immediate parents did not show, but which were present in their direct or collateral ancestors.

The "solution of continuity in the line of direct heredity," known as atavism, is derived from the Latin *atavus* (a great grandfather); and I would define it as the tendency in animal and in vegetable life to inherit biological preëxistences and to return to a primitive type progressively altered. It is by virtue of this tendency that living organisms inherit peculiarities from their remote ancestry which their immediate parents did not present.

Atavism is not to be confounded with ordinary inheritance or heredity. In the latter the tendency of nature is to reproduce in the offspring certain peculiarities of the parental organization; under the influence of atavism, the offspring may take the traits and characters of the primitive forms with no resemblance either to father or grandfather, but to ancestors more remote. Atavism should be distinguished from the variations, teratological, pathological, or toxonomic, that interrupt the succession of hereditary phenomena. Nearly synonomous is the term *survival*, used by Tylor to signify a superstitious remainder or residuum of bygone ages, and the Darwinian expression *reversion* to indicate the occasional or individual appearance of traits accumulated by heredity and handed down from remote ancestry. Reversion is also used to signify the actual returning of a variety or species to such remotely descended traits. This is instanced in the tendency of animals long domesticated, when they become feral, to revert to the pristine form. As a case in point we may mention the wild horses of Montana, which are such a source of annoyance to stock raisers in enticing away tame horses that their slaughter is made an object of hunting parties. That the notion of atavism has prevailed for some time, it is only necessary to allude to the biblical version regarding the visitation of the sins of the father upon the children of the third and fourth generation. In the sixteenth century Montaigne noticed these strange transmissions, and wondered how the little drop of semen from which we are produced, bears not only the impression of the bodily form, but a likeness of thought and inclination through a progress so hap-hazard and so irregular that the great-grandson shall resemble the great-grandfather, and the nephew the uncle. Darwin, speaking of the injurious characters that tend to reappear through reversion, mentions the blackness in sheep, and among mankind some of the worst dispositions which occasionally, without any assignable cause, make their appearance in families.

To come down to the present time, there are men among us to-day "who have come too late in a world too old"—men whose skulls are of an absolutely neanderthaloid type; men whose minds are struck with an immobility, an arrest of development, an intellectual atavism, a reversion to ancestral forms and prehistoric ideas as well-marked, for example, as the birth in a family of a red-headed child whose parents are not xanthochoroids, or the reappearance in a flock, at intervals, of the familiar black sheep. In the brain of such of our contemporaries, in consequence of the reappearance of an ancestral conformation, there appear the ideas of the middle ages, which make of this contemporary a living fossil, absolutely inaccessible to modern ideas. All of you can recall acquaintances of this description. Such people are found clinging to hoary-headed errors and old superstitions, not only in science but in all the walks of life, social, religious and political. Of what use is it to talk to such men about the reduction of the tariff, or the brotherhood of man, of association, of science? Such men, cerebrally speaking, are of the reactionary class, and though walking about under the mask of contemporary manners, belong to the middle ages just as much as though they wore sword and doublet.

It is no vague generality when we say that the characters transmitted by atavism are of all orders, normal, pathological, teratological, intellectual, and moral; and that they may be observed in the two kingdoms, animal and vegetable, in domestic animals and in man.

The atavic influence has been well traced in the laws that determine the evolution and culture of a plant, and in its reversion to the wild or uncultivated state. This may be witnessed in many flowers and vegetables, and in fruit trees, but the mention of the experiments made with the little flower known as the *bluet*, or bluebottle, and with Indian corn, will suffice as illustrations. Broca continued these experiments for eight years. He found, among a bed of bluets sowed with seed collected from an open field, the greater

part of the flowers to be blue, but some bore violet flowers, and even some a little reddish. The seeds of these reddish flowers were sowed and collected the following year. Of a hundred flowers, about two-thirds of them were a fine blue; others presented various shades, ranging from blue to violet, from violet to red, and even to rose. The lightest colored of these flowers were preserved and used the following year to sow another border. This time the number of flowers entirely blue was little less than half; the greater part being violet or red. There were many red, and some of a red so light as almost to pass for white. It thus appears probable that in making a methodical selection from each generation of the lightest-colored flowers, the conditions are favorable to obtain a fixed race of *bluets* quite *white*.

The influence of atavism is further shown in maize, or Indian corn, of which there are two varieties, or rather two distinct races, the light and the brown. That they are more than varieties is shown by the fact that we can never obtain by culture intermediary shades. Artificial fecundation being easy upon this androgynous plant, permits us to obtain variegated ears, which bear at the same time light grains and brown ones, as we see in what is known as "pop-corn;" but each grain belongs to one or the other race. A farmer, having accidentally discovered an ear of corn entirely brown, called the attention of Broca to this extraordinary circumstance. He considered it a natural variety, produced spontaneously, perhaps, under the influence of an atavism going back to a great number of generations. The grains of this ear having been planted, gave sixty-nine ears, thirty-five of which were light and thirty-four brown. Repeated experiments gave equal results. A fact worth noting on this point is that all the ears of the same stalk were of the same color.

Atavism is shown in the seminal principle that passes secretly through a generation, as is seen in certain insects, the wood-louse, for instance, where a single fecundation answers for nine generations of insects, all of whom are born prolific, and procreate without the help of the male. In this case the individual of the ninth generation has received his life, his form, and his instincts from an eighth grandfather, a long time disappeared. Another example of an anatomical order occurs in silk-worms of a white race who produce a certain number of yellow *cocoons*, although these have been carefully weeded out for more than a century.

The same law that governs the vital continuity in the foregoing instances applies to the lower animals and to mankind. Atavism in pigeons is well known; and nearly every one has noticed the stripes on certain horses, which are a reversion to their common ancestor, the zebra. According to Quatrefages, it is in vain that they kill each year, in the flock of black sheep in Andalusia, every lamb that bears the least trace of white wool; each year there are born still some individuals that have the proscribed tint. In domesticated animals atavism plays a considerable rôle in all races that have been formed by breeders. With dog-fanciers and stock-raisers it is a matter of so much concern that they have need to exercise great care in the multiplication of these animals, and to choose as reproducers only those whose grandfathers have no transmissible defect. On this point the experiment mentioned by Darwin may be cited: The Earl of Powis caused some domesticated hump-backed cattle to be crossed by the wild species of India, with the result not of producing a medium grade of characteristics, but of a marked reversion to the ancient. If the time allowed, I might adduce numerous other instances of remote atavism, such as that of the numerous muscles appearing abnormally in man which are normal to the lower animals, notably the monkey. Other facts of the same order have reference to the teeth; the persistence of the molar and the metopic sutures and of the semi-lunar fold in the eye, double mammaries or uterus; and other sleeping conformations, that are sometimes recalled into existence.

It is in virtue of atavism that man, like other animals, often reproduces the traits of his grandparents. Characters occasionally make their reappearance in him which we have reason to believe were possessed by his early progenitors. Unhappily for man, atavistic antecedents are not taken into account in the matter of union of the sexes. People marry and the offspring frequently resemble the grandparents, not only morphologically, but in temperament, diathesis, and even their diseases.

It is well known that portrait galleries and the monuments of churches in Europe help to trace the source from which some long-lost type of feature has been derived; and the reappearance of the Bourbon nose in France is a matter of common knowledge.

Less vague facts of this order are those occurring in the cases of crossing of the colored races. Martin de Moussy has observed families in which at the end of several generations there were a series of children having much more than their father or mother the signs of an African mixture going back at least to a fifth anterior generation. He cites also a woman whose father was a quadroon and whose mother offered traces of African blood, married to an Englishman of pure race. She had nineteen children, who all offered unequivocal traces of this sixteenth of African blood. On the other hand, two sisters of this woman, married also to Europeans, had children who bore no trace of the paternal mixture. (*Bulletin de la Soc. d'Anthropologie*, 1865, p. 288.)

The occasional appearance of a child covered with hair is regarded by many as a fact of very old atavism. The hairy men of Japan, the Aïnos, are also believed to be reversions to some ancestral form, and it is argued by some that the anthropoid apes may be the descendants of ape-like men. Persons who have lately visited the Paris Hippodrome may remember a pilose Russian, whose peculiarities are believed to be a phenomenal reversion to the characters of a very ancient lost race. Other examples of teratological pilosism might also be cited. It is thought by those who have given the matter attention that many races of men have lived before the present ones without sending representatives of their types down to us; but they have not disappeared without the blood of several among them being transmitted, by infinitesimal dilutions, down to the present races.

An attempt to point out with precision the laws of atavism results in the statement that every organized being is the product of two forces, one of which is the resultant of his complete genealogical tree, from the first origin of the organic branch from which he springs, and the other is furnished by all the circumstances that have acted upon the individual himself during all the duration of his development. It is further asserted that when men or animals manifest impulses of an excitable character, and exhibit pleasures and sympathies that seem to be out of relation to their culture and personal experience, or to the culture of the family or the race, whether in dreams or in waking, the source of these must be found in long past or ancestral memories produced according to the law of reversion.

Perhaps not the least curious of the modes of atavism is its influence in the province of the mind. Philogenic heritage manifests itself in connection with memory. According to Galton, the celebrated Hellenist, Dr. Porson, whose memory was surprising for its extent and fidelity, transmitted this peculiarity to one of his grandchildren, and Lady Hester Stanhope claims to have inherited her grandfather's memory. Assuming that certain ancestral synesies have been ancestrally realized in time and place, the reversion to them may become the starting point of a new evolution. The capacity of reproduction or a new develoment of the transmitted antecedent synesies or substrata is ancestral memory. The faculties that preside over the representative signs of ideas, it is said, are also subject to the law of correlative evolution and reversion which is manifested both in health and disease. Scriptory atavism is witnessed in the reversion to ancestral styles of writing; and in the speech it is noticed in the reversion to ancestral or racial pronunciation of letters and words. In aphasia the patient often reverts to the language of childhood, which is his only language, and like some races of savages, he is unable to pronounce labials. A further pathological reversion is seen in dreams, which in fact are nothing more nor less than abnormal reminiscenses and reproductions. Even the pleasures and pains of memory may be transmitted as substrata from remote ancestors. States of consciousness, owing to ancestral reversion, are shown by various facts. It has been noticed that in a menagerie the straw for bedding lions and tigers could not be used for horses, because the odor terrified them when brought into the stable. Yet many generations of horses have passed away since they were troubled by these beasts. Sir Daniel Brewster's fear of drowning, which haunted the minds of more than one of his descendants, is also cited as an instance.

Reversion to synesies is shown during special conditions of the brain tissue, such as characterize sleep and dreaming, somnambulism and insanity. Certain vain pleasurable and painful states are likewise due to ancestral reversions. The keen pleasure afforded by the sight of mountains and hills; many prejudices, antipathies, and æsthetic sentiments are due to ancestral substrata.

In no other way can I account for these conditions as observed in myself while strolling about the streets of Edinburgh, or in listening to the bagpipes, in climbing the heathery Scotch hills, or the misty hills of Alaska—sights and sounds that doubtless afforded similar pleasure to my Caledonian ancestry.

Emotional reversion is noticed in those cases of cerebral disease in which the semeiotic or sign-making tissues are involved, and speech or the other modes of expression are affected. Immoral dreaming among persons whose life is above reproach during waking hours, is cited as a further instance of morbid emotional reversion.

There are also reversions owing to defective evolution and nutrition that can be traced beyond immediate ancestors to the substrata of the race acquired during savage or primitive life in long distant ages. An instance of this occurs where the conduct is that of uncivilized man. In theroid idiotic, or imbecile reversion to brute-like character of form, there are no signs of morphological reversion, but the dominant aberrations are theroid. The permanence of a substratum of savage life is seen in our large cities among the vicious classes, who are to all intents and purposes savages in everything but speech, dress and name.

Of psychological interest at the present time are the reversions to ancestral modes of thought in France, where there is a reversion to the ancient doctrines of metempsychosis, and of the evolution and transmission of souls.

In human pathology the reappearance of morbid traits existing in ancestors, but not in immediate parents, can be maintained by cited cases; and the influence of atavism in the hereditary

transmission of disease can be traced for four, five, seven, or in fact, an unlimited number of generations.

Alternate heredity of anomalies have been noticed in such conditions as polydactylism, hare-lip, gibbosity, and the like. Most physicians have under their own eyes some examples of diatheses that jump one or more generations. The principal diseases and defects in which the influence of atavism has been traced are color-blindness, the hæmorrhagic diathesis, pseudo-hypertrophic paralysis with its allied diseases, and a large number of the neuroses. Lucas cites numerous facts of atavism for ocular infirmities. Pliny relates that in a family three persons were born with eyes covered with a membrane, and that this vice of conformation always skipped one generation (lib. vij, ch. xij).

Among the old and well-known cases of color-blindness is that reported by Dr. Earle, in which in addition to the usual limitation by atavism to alternate generations there was evidence of transmission from a great-grandfather to two great-grandsons, without the development of the peculiarity in the intermediate transmitters of the defect. There is another and more recently recorded case of the same kind in which two generations were skipped over, the transmission being effected through two females in the second generation, and thence onwards through three females in the third generation, to seven great-grandsons in the fourth generation.

Such extension is still more frequently observed in cases of hæmatophilia or the hæmorrhagic diathesis. In fact, its most important mode of propagation is not so much by the bleeders themselves as by their non-bleeder brothers and sisters. In the literature of hæmatophilia there are numerous instances of its indirect transmission. The "Appleton-Brown bleeder family" is known to American physicians. Investigation shows the "Tenna bleeders," in Switzerland, to be descended from a remote ancestor named Walther. The influence of atavism is distinctly traced in the insanity and blindness of George III, to his remote ancestor, Duke William, eight centuries back. Cases of deaf-mutism have been known to descend from male ancestors five generations back, and the atavistic transmission of a family defect to be handed down in a direct male line from a deaf-mute great-grandfather to a deaf-mute's great-grandson. Daly states that in 124 deaf-mutes in the Institution of deaf-mutes at Paris three cases of deafness proceeded from the grandfather. Venette and Puybonnieux cite analogous facts.

Dr. Matheson, of Ontario, who has examined the histories of 661 deaf-mute children, states that he is unable to find that any of the parents were, or are, deaf and dumb persons. A few of their grandparents, however, were mutes.

In the same manner that we may find numerous examples of alternating heredity of mental disposition where family traditions are preserved, so may the instability of insanity pass on through one or more generations without its being developed. A case is related where a man had two wives, and by each wife one child—a boy by one and a girl by the other—yet both these children were alike nervously unstable, the father's mother having been a lunatic.

Many practitioners have noticed that gout, pulmonary tuberculosis, and scrofula may jump one or more generations. G. Seé has observed seven cases of the scrofulous diathesis which sprung from the grandparent had left the parents free. Other diseases, diathesis, neuroses, and even congenital and moral defects, the so-called criminality and forms of wickedness, may sometimes disappear for several generations, and crop out in a manner evidently owing to a reversive anomaly. This is instanced in the history of prostitution, in the issues of courtesan mothers, and it is not necessary to refer to the Messalinas, Poppes, and Julias, of antiquity.

Hypospadians may be developed by what is termed "indirect atavism." On this point Dr. Lingard remarks that all breeders of cattle and other animals are familiar with this fact of the females throwing back, that is, reproducing, after impregnation by a second male, the peculiarities of some other male by whom they had previously been impregnated. That this is possible in the human female he thinks is proven by the following case: The third of six hypospadians died a few years after the birth of his three sons. His widow within eighteen months contracted a second marriage, the husband in this instance not being a hypospadian and having no history of any such defect in his family. By this marriage she had four sons, all hypospadians. Two of these hypospadic sons begat hypospadians in their turn. But one of these sons had three boys without any deficiency, although the eldest boy was a hypospadian. Sir Henry Holland mentions an instance in which four out of five of a family of children became blind at the age of 12; the only record of any preceding occurrence was an ancient tombstone, the figures and inscriptions on which showed that a mother and her children, members of two remote generations of the same family, had also been blind.

Facts like these merit confirmation by other facts rigorously observed; and it is to be regretted, in the interest of science, that families are averse from keeping a history of their diseases. It is to be hoped that Mr. Francis Galton's recent efforts in this direction may be successful in throwing further light on the manner in which these biological peculiarities, though interrupted or latent, are transmitted and yet return to visit the children of other generations.

In medicine reversive anomalies are something

more than simple objects of curiosity. They have both philosophical and pathological value; and in the same manner that pathological anatomy teaches us a great deal about physiology, so we may learn much from studying the development of the brain and nervous systems both in a phylogenic and in an ontogenic or fœtal way.

That form of reversion found in microcephalic idiots is highly instructive, and according to Carl Vogt, is one of the finest examples of reversion character to be found in the whole range of teratology. Besides, a correct observance and methodical study of what takes place in the minds of idiots enables us to determine many of the anatomical and physiological conditions upon which are based the manifestations of their intelligence.

I wish I could dwell longer on the phenomena of these important subjects, and that more particularly for the reason that they are scarcely mentioned even by the standard classical writers on physiology. I can only dismiss them by saying that the questions of atavism and of teratology are almost entirely new, and that the future will assign to them a much more important rôle than we have any idea of at the present.

THE FAILURE OF DR. J. B. THOMAS' TREATMENT OF URETHRAL STRICTURE BY ELECTROLYSIS.

BY ROBERT NEWMAN, M.D.,
OF NEW YORK.

My excuse for trespassing on the space of THE JOURNAL, is to correct any false impression that may have been created through the erroneous conclusions drawn by Dr. J. B. Thomas, of Pittsburgh (in THE JOURNAL of August 11), from an obvious misinterpretation of my report of the second hundred cases of urethral strictures treated by electrolysis.

Dr. Thomas unqualifiedly condemns treatment of urethral strictures by electrolysis, and urges upon us his limited experience and failure in a very meagre report of one case.

Is it sound logic to condemn an operation and method because a novice has made a failure in one or a few cases, when surgeons of undoubted standing from all parts of the world have reported hundreds of successful cases, endorsing, recognizing and establishing the method and operation as a success?

Dr. Thomas' statement is, that his patient, S. K. M., presented himself with cystitis and several strictures, for which he had been treated by many doctors, and in many ways. Dr. Thomas' treatment of him by gradual dilatation was a failure, because after having dilated the urethra to the size of a No. 24, French, on next presentation of the patient it was found that the urethra had again contracted to No. 20. Electrolysis was then used four times. "Patient presented himself with an inflammation of the urethra *anterior to the first stricture so severe in character, etc.*." (Italics are mine). "The patient never returned."

Comments: Why was not the cystitis treated first, or at least simultaneously, with the stricture? It is not stated that the cystitis was treated, therefore we must believe that it was not. Certainly treatment of the cystitis was indicated, since spasm of an inflamed bladder may prevent any amelioration of the stricture, and especially will prevent the success of electrolysis.

The next question is, what caused the inflammation of the urethra anterior to the stricture? Was this inflammation the consequence of the treatment, or caused by an imprudence of the patient? I do not wonder the patient never returned. And I must protest against the condemnation of electrolysis in the treatment of urethral strictures, on such evidence.

Dr. Thomas next (doubtless for his own reasons) attempts so unfair an analysis of the statistics of my second hundred cases, published in THE JOURNAL of Sept. 24, 1887, that I feel it my duty to reply: *First*, to correct his misstatements of my statistics. *Second*, to maintain my position in regard to urethral anatomy and surgery, in which Dr. Thomas and I differ widely.

Had the gentleman carefully read my papers he would not had made his paper a personal attack, and would have saved me the necessity of repetition to answer frivolous objections to the method of electrolysis.

Dr. Thomas though admitting No. 31, French, to be the calibre of the ordinary urethra, yet carps at cases presented in my statistics enlarged to No. 32, French, claiming that some must have been capable of enlargement to No. 40, French, closing with these words, "it is quite an imposition upon the credulity of the profession to state that such patients were, as we are led to believe, cured." I answer that no one is "led to believe," but Dr. Thomas misleads, by entirely ignoring my *definite* statement of the cure, as set forth. We may, and certainly do, differ about the size of the normal urethra, and as to what is meant by a cure. I have heretofore explained that I do not enlarge the urethra to a certain theoretical size, but mark in my statements "cured," when the patient feels and is well, passes a free, unobstructed stream, and is satisfied with his condition to such a degree that he objects to any further treatment and enlargement, and does not desire a larger-sized urethra. In some exceptional cases circumstances may alter the rules. As a rule I have tried to enlarge strictures to No. 28, French, but when the meatus would not admit an instrument larger than a No. 25, I certainly stopped, and did not cut the meatus. In many cases I found that no larger instrument than a No. 25 would pass the meatus. I do not

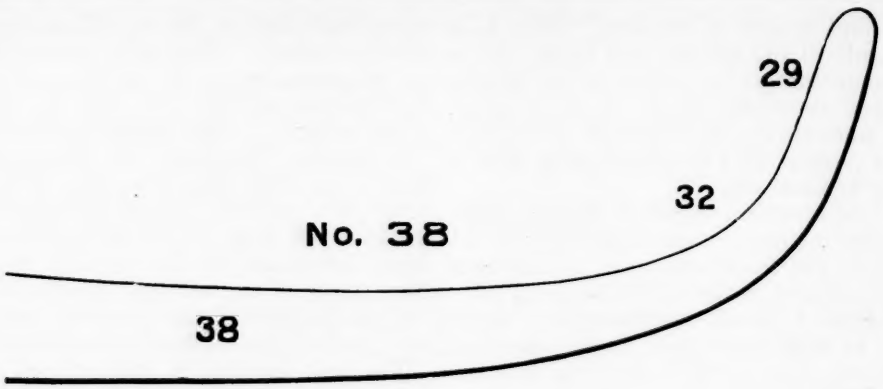

FIGURE 1.

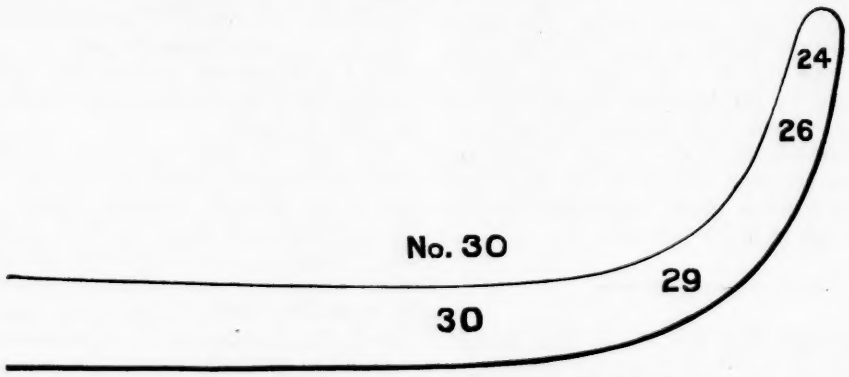

FIGURE 2.—Figs. 1 and 2, the ordinary Steel Sound.

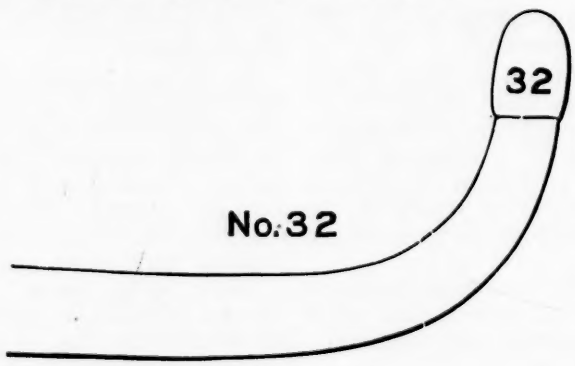

FIGURE 3.

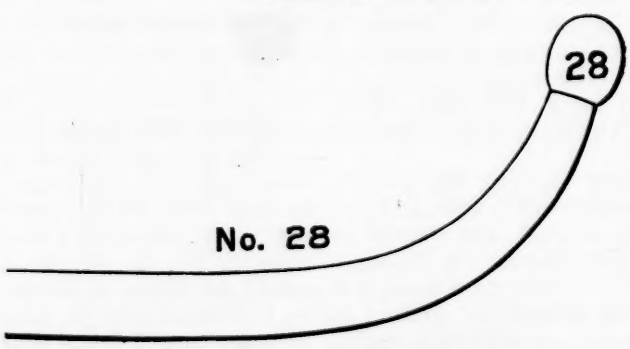

FIGURE 4.—Figs. 3 and 4, Newman's Electrodes.

intend to discuss theories and simply repeat facts that have been reported before, which Dr. Thomas wholly ignored, courteously adding "Twenty out of the hundred were never seen after treatment was discontinued." But he neglects to state that such cases were only recently treated, and the urethra enlarged to its maximum size of 28 and 32, French, and were so well that they did not need to be seen again. In most of the cases the patients were reëxamined, varying in the first hundred in point of time from three and a half to eleven years; in the second from one to five years. No relapse having occurred, viz., no contraction having taken place, meaning that the same sized sound was used in the reëxamination without electricity, as passed with electricity at the close of the treatment.

The usual steel sound tapers, so that the end which is used in entering the meatus is from two to nine numbers smaller than the stem of the instrument, while my electrodes have upon the end which is used in entering the meatus, an egg-shaped bulb, which is the full size given in my tables. It is easier to enter the urethra with the tapering instrument than with a six-sizes larger egg-shaped bulb. The accompanying drawing will illustrate it. Figures 1 and 2 represent the usual steel sounds; figures 3 and 4 my electrodes. It will be seen from careful measurement that a No. 38 is at its conical end only a No. 29, and in figure 2 we find that a No. 30 is at its conical end only No. 24; this tapering end making a difference of four and nine numbers respectively. It is easier to introduce a No. 38, when the conical end is equal to a No. 29, than to pass through the meatus my round, egg-shaped No. 32, as it is evidenced that my No. 32, French, electrode is nearly equal in size to the ordinary No. 40 sound. I have in my writings explained why my electrodes have the egg-shaped bulb for my treatment by electrolysis. My statistics show that in 33 per cent. of cases the stricture has been enlarged to No. 28, which is equal to about an ordinary No. 32 sound, and that no relapse has taken place; and such an enlargement has been made in some cases of strictures which were so small that no instrument could pass at first. From the experience and observation of many years I have come to the conclusion that the majority of urethras are normal if my No. 28 electrode can pass, that No. 30 is an exceptionally large urethra, and that No. 32 is almost always too large, and sometimes I regretted having used it.

The next mistake Dr. Thomas makes is in saying that some patients were discharged with their urethras admitting only a No. 14, French. This I deny. In my statistics No. 14 is mentioned twice, as follows:

No. 138.—A. N., Two months enlarged to No. 14, then disappeared, and two years later enlarged to No. 28. Reëxamined May, 1887, and found No. 28. No relapse. Still under observation.

No. 183.—Dr. O. V. S. No instrument would pass. Improved very slowly to No. 14. Gout, etc., prevented his retnrn.

Therefore, it will be seen that the first case was enlarged to No. 28, with no relapse; and that the second case was not reported as "cured," but only as "improved." The patient was unable to return for treatment, but it was a success as far as seen because the very aggravated case which admitted *no* instrument at first was made comfortable, and undoubtedly would have been cured if a chance had been given to do so, but the patient, a medical man, was disabled to such a degree that he could not travel the considerable distance from another State to my office.

Dr. Thomas next indulges in the statement that only nine out of the hundred cases were reëxamined after the lapse of two years from time of last treatment—but the learned gentleman omits to state (perhaps inadvertently?) that thirteen cases were seen after the lapse of three years, six cases after four years, etc., without the occurrence of a relapse and that all hundred cases reported were seen within a period of five years, some remaining still under treatment or observation when those statistics were sent to press. There was no claim that those cases were all cured; the record speaks for itself and shows how far they were improved, or a good reason given why they were not more improved.

The next omission of my analyzer is, that the patients of my first hundred cases mentioned had been under observation from three and a half to eleven years without a relapse, which makes an average time from six to seven years in each case. *All these facts* were stated plainly in my statistics, which Dr. Thomas had the kindness to analyze, and he will know best why he omitted all these facts, and tried to show that electrolysis is a "delusion and a snare," that it does no good, and that the improvement was due to dilatation, and after all, there were no strictures present, but only spasms! Gracious goodness! who will believe such logic? Not even the incredulous Thomas, who seems not to know that it is an established fact that Galvanism *vel* electrolysis *never* cures or overcomes a spasmodic stricture; on the contrary it may cause a spasm, which is so distinct and so powerful a contraction that no force, not even a one-horse power, will overcome. Besides, what operator of to-day will not be able to distinguish between a spasm and an organic stricture?

And now in regard to the insinuation as to dilatation *versus* electrolysis. I have clearly stated that the electrolysis enlarges the strictured part by galvanic chemical absorption; that when dilatation and even pressure will not pass a stricture, electrolysis will. This I have often demonstrated in the following manner: The electrode was introduced to the seat of the stricture, and the sur-

geons present were invited to press the instrument through the stricture. They tried to do so, and declared that they could not. Then and there, without the removal of the instrument, electrolysis was used, and in a few minutes, or less time, the same instrument passed the stricture. This has been demonstrated so often and can be proven by reliable witnesses, that the insinuation of dilatation becomes a *fata morgana*, like all the other views of Dr. Thomas.

Dr. Thomas does not state in his report of the single case, how he used the electrolysis, nor does he tell what his most approved apparatus was, and summing up uses the following language: "The remainder, we are told, were well, and we are to accept the assertion, I presume, on faith. . . . . If electrolysis in the treatment of urethral strictures is a delusion and a snare, I hope this paper will bring out the experience of those who can speak *ex cathedra* upon the subject, and if the consensus of opinion confirms my own, I then am glad that I have added my feeble effort to assist in pricking the bubble."

Candidly I do not envy any one who can use such language, and I leave it to my readers to surmise what animus has prompted him. My answer to his article is only intended to elicit the truth in regard to facts as they are. These facts of my statistics would be less strong if I were the only man who uses electrolysis successfully, but my method is recognized now all over the world by eminent surgeons who have given excellent records of success from America to Australia and Asia. Skeptics and gentlemen who formerly failed have been converted by facts and become successful operators. The literature on the subject, and hosts of successful operators, are mentioned in an editorial of the *New England Medical Monthly*, December, 1887, which is worthy of perusal, and proves beyond peradventure the success of electrolysis in the treatment of urethral stricture. More evidence comes almost daily from honest workers who formerly were skeptics, or failed at first, and at last relate their successes. Among the latter, as an instance worthy of notice, the valuable article of F. Swinford Edwards, F.R.C.S., Surgeon to the West London Hospital, and Surgeon to the out-patients of St. Peter's Hospital for fistula, etc., (*Medical Press and Circular*, April 11, 1888) from which I take the liberty to quote:

"When, some two and a half years ago, the treatment of urethral stricture by electrolysis was taken up by my friends, Dr. Stevenson and Mr. Bruce Clark, who were led to test its merits from the published reports of a brilliant series of cases by Dr. Newman, of New York, I determined to try it here at St. Peter's, and more especially in cases of resilient, or non-dilatable stricture, which in the usual course would be submitted to some cutting operation, attended possibly by risk of life, at all events necessitating detention in the hospital for one or more weeks, a loss of time which is of great moment to many and most can ill afford . . . . . There is yet another reason why I have selected only the severer forms of stricture in which to test the capabilities of this method. It is in order that there should be no room for an objection which I heard raised . . In the table of cases before you most of the strictures were of long duration, and were multiple. Now these strictures were no myths, nor was their resilient character open to doubt, some of them having been in the hospital under my colleagues, whilst others had been under the care of well-known hospital surgeons. The number of strictures, their calibre and distance from the meatus, has been noted and the result of treatment given, I trust with impartiality. . . . . The first I treated with the aid of my friend, Dr. Stevenson, and so struck was I with the result obtained that I hastened to give electrolysis a fair trial at this hospital. The patient had been under me two and a half years previously with three strictures which after a month's treatment I succeeded in dilating to No. 25. In February, 1886, he came to me again for stricture, but on this occasion I was unable to dilate the sub-pubic one by passing bougies. This then I conceived to be a good test case for the new treatment. For the result I have put down cured, as six months afterwards, although he had undergone no treatment in the meantime, I found no sign of stricture after carefully examining his urethra.

The advantages of electrolysis are many, viz.;

1. No confinement is necessary.
2. No risk of life.
3. No pain, and only sometimes slight discomfort.
4. No bleeding.
5. If unsuccessful it does not interfere with urethrotomy being undertaken forthwith.
6. and lastly, a cure (permanent) may follow, which is the rarest thing by any other method. In electrolysis, as far as I have seen and heard, no risk whatever is run, hence the opinion I have just expressed. I commend it, gentlemen, to your careful consideration."

I have much more proof at my disposal to show the success of electrolysis, but am unwilling to further intrude upon the valuable space of THE JOURNAL. I myself have used this method for nineteen years.

I do not wonder to hear sometimes of failures; as some men will fail in everything, others only in some particulars; and it has been shown that of all the students of medicine, after entering life as physicians, 25 to 45 per cent. are failures. Even "expert genito-urinary surgeons, of world-wide reputation," may fail with electrolysis when not electricians, or even careless in their operations, and even the purchase of an improved electric armamentarium does not make its possessor an elec-

trician. Such reports of failures do not undo or detract from the statistics of hundreds of cases of successes, they will still stand as truths everywhere. Electrolysis as a chemical action, etc., is infallible, though machines and operators may fail.

ON HEADACHES FROM OVERLOOKED CAUSES IN THE NASO-PHARYNX AND EARS.

Read in the Section on Practical Medicine at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

BY H. GRADLE, M.D.,
OF CHICAGO.

The present communication is intended to call attention to certain attacks of more or less persistent headache, the causes of which are often overlooked. These headaches, due to naso-pharyngeal or aural disorders of which the patient is scarcely conscious, are perhaps not common. But the fact that they do occur and can be more or less readily relieved seems to warrant their description. If the writer has seen a fair number of these somewhat exceptional cases, it is on account of their having been referred to him—often under the impression that their cause might be some refractive or other anomaly of the eyes.

Four types of such disturbances have been seen often enough to be classified as types.

1. The least frequent form of such headaches of occult origin is that of diffuse pain throughout the head, lasting from one to three or even five days. Such an attack may occur again after a variable length of time, or (more rarely) one attack may follow directly after another. Between those instances in which the patients complain of nothing but the headache, and the other extreme in which malaise, bone-ache, and slight rise of temperature characterize the disorder as an acute infection, all gradations can occur. In the last-named class of cases slight throat symptoms point out the hidden origin of the trouble, viz.: circumscribed follicular tonsillitis, or rather follicular angina. For the lesion may be either in the tonsil, or in a lymphatic follicle of the pharynx, or in the pharyngeal tonsil or its lateral expansions. It can be seen in the form of a whitish spot, located in a crypt and surrounded by a narrow congested zone. The more numerous these inflammatory foci the more marked are the febrile symptoms, and the more noticeable the local disturbances, while a single spot may not make itself felt in any way but by headache.

Although each attack is self-limited in course, its duration can be shortened by brushing with a strong solution of nitrate of silver.

2. A second more common type of headache is a dull occipital pain, lasting only perhaps some hours or days, but frequently returning. It is occasioned by enlargement of the pharyngeal tonsil in the form of adenoid vegetations. It occurs especially during the congestion started by a fresh "cold," but at other times as well. I have met with it only in children. Any extensive glandular hypertrophy at the roof of the pharynx can scarcely be overlooked by an attentive physician. But a minor degree of enlargement in an otherwise healthy child may give rise to no symptoms but those of impeded nasal respiration at night, and may hence escape detection. The treatment is as simple as it is efficacious, viz.: operative removal of the pharyngeal tonsil.

3. Headaches due to hypertrophy of the nasal mucous membrane have come under my observation a limited number of times, but always in individuals either of a neurotic type or run down in health from overwork or worry. The pain was either frontal or diffuse, not very severe and not constant, but increased by excitement or mental work. The nasal lesion consisted in hypertrophy of the mucous membrane, especially on the middle turbinated bone, from the free edge of which the swollen membrane protruded as if it were too large for the bony frame. In some of the cases distinct polypi were present. Catarrhal symptoms, or at least catarrhal secretions, are not a necessary feature of this condition. Some of the patients, indeed, scarcely paid any attention to their nasal symptoms. I have generally found that where true hypertrophy of the mucous membrane predominates, the vascular irritability and permanent enlargement of the submucous cavernous tissue are not very marked. The nasal lesion can be cured by frequent spraying with nitrate of silver solution, and in proportion as the nose improves, the headaches diminish. Wherever the mucous membrane projects in polypoid form, it is of course the quickest way to remove it with the hot or cold snare.

I will not refer at present to the various forms of headache associated with the condition of irritable nose. For in that form of trouble in which there is more or less enlargement of the cavernous tissue and consequently marked—though it be temporary—obstruction of the nasal passages, the patient will himself call the attention of the physician to the state of his nose.

4. A fourth type of almost continuous headache I have met with in children, dependent on diminished patency of the Eustachian tubes. When the hearing is not impaired a fairly intelligent child may suffer from a feeling of fulness in the ears without ever complaining of its ears. Occasionally the obstruction of the Eustachian tube, and subsequent reduction of intra-tympanic pressure, gives rise to persistent headaches, which stop at once on inflating the middle ears. If the Eustachian obstruction be one-sided the child notices a difference between the two ears. But if both Eustachian tubes are involved without

marked impairment of hearing, the ear trouble may not be suspected, and it is only after inflation that the child feels that its ears are now "more natural" than they were before. Such slight Eustachian obstruction, and the headaches dependent thereon, can be readily cured in children by a few inflations, either by Pollitzer's method or, still better, by means of the Eustachian catheter. The naso-pharynx should, of course, receive due attention, in order to prevent a return of the Eustachian obstruction.

Central Music Hall, Chicago.

A SYSTEM OF FREE NURSING AS ORGANIZED IN PHILADELPHIA.

Read in the Section on Obstetrics and Gynecology at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, May, 1888.

BY JOSEPH PRICE, M.D.,
OF PHILADELPHIA.

I desire to call the attention of this Association to this system of free nursing because I regard it as a most valuable factor in the proper treatment of the sick poor; as a necessary lesson to the lower classes in cleanliness and the care of the sick; as the most efficient aid to the surgeon in non-paying practice, and because I hope that the idea suggested may prove to be of practical benefit to the profession in cities and towns not blessed with suitable institutions for the proper care of the sick poor.

The Visiting Nurse Society, of Philadelphia, was organized a little over two years ago by a few charitable ladies of this city for the purpose, as their charter reads, "of furnishing visiting nurses to those unable to secure skilled attendance in time of illness, to teach cleanliness and the proper care of the sick." It is supported by voluntary contributions and such small amounts as the patients may be able to pay, and its last report shows a remarkable amount of practical benevolence secured by the outlay of a very small sum of money. The Society in the beginning employed a trained nurse with one or two assistants, who were also pupils. Additional nurses were employed as necessity arose until the staff now consists of seven nurses and assistants and one maternity nurse whose work is confined to that specialty. Special nurses are provided for contagious diseases as they may be required, the regular staff not coming in contact with such cases. The Society was very fortunate in the selection of their head-nurse, who is a trained nurse of more than ordinary ability, both in practicing and teaching her profession.

The assistants are all young, healthy women, selected for their peculiar qualifications and carefully trained under the supervision of the head nurse. In cases demanding immediate operation these nurses make all preparations at the shortest possible notice, viz.: thorough cleansing of the room and person of the patient, often supplying fresh body and bed linen, one or more nurses to assist in the operation, and one to care for the patient during the subsequent treatment. I have known these nurses to go in an attic or cellar in the heart of the slums of the city, the rooms reeking with filth and overrun with vermin. The patients, fit inhabitants of their homes, destitute of the bare necessities of life, not having even a receptacle in which to boil water, and often dependent on their neighbors for food and fuel. In a few hours the nurses have cleaned the room, supplied the necessary funiture and utensils and prepared the patient for an abdominal section. With such an organization at his command the physician or surgeon has no reason to fear undertaking any case, surgical or medical, at the homes of even the poorest of patients. In the clinic of the female department of the Philadelphia Dispensary, for years I did not attempt to do any of the abdominal work that constantly presented itself because of the lack of such a free system of trained nurses.

Since the organization of this Society we have done over ninety abdominal sections in the alleys and courts of this city, with only one death. And these were not selected cases, but were done because they were imperative. In addition, many general operations of more or less severity, but requiring skilled nursing, have been performed, and in every case the nurses of this Society have proved themselves equal to the occasion. During the past year the Society has cared for 90 surgical cases, out of a general list of 369, necessitating nearly 6000 visits. So far during this year they have attended nearly 200 cases, of which 50 per cent. were surgical.

The medical profession of Philadelphia has reason to congratulate itself in possessing such an efficient corps of assistants, and to wish for the extension of the benevolence to localities less favored.

CALCIFICATION OF THE CARDIAC VALVES. DEATH FROM CEREBRAL EMBOLUS.

Read before the Medical Society of the District of Columbia, April 11, 1888.

BY FREDERICK SOHON, M.D.,
OF WASHINGTON, D. C.

The calcification of the cardiac valves, shown in the specimen presented to-night at the request of several members who have already examined it, derives its interest not from the simple fact that it shows a diseased organ, but from the circumstances attending the patient's life and the manner of his death.

His family and friends give the same account

of the patient. He was perfectly healthy; never was confined to bed by illness; and, as far as could be ascertained, he never complained of any ailment, or any of the many incidental symptoms which usually accompany such a condition of the heart valves. He was white, aged 71 years, and a clerk by occupation. Physically he bore his age well, but he was rather absent-minded.

When seen at 6 o'clock on the evening he was attacked, he did not complain. Later he was found lying on the floor of his office, his position and surroundings pointing to a sudden attack. He had apparently fallen from his chair; his writing was stopped abruptly; and it was said he vomited his tobacco. When raised he seemed to look at the person with one eye, while the other quivered and wandered. He attempted to raise his arm, but was unable to do so. When spoken to he uttered disjointed sounds, as if trying to speak, but could not advance his tongue, although he swallowed medicine mechanically.

He was brought to the Emergency Hospital at 7:45 P.M., totally unconscious. Superficial circulation was below normal; the pulse quick and fairly strong, with a rate of 65; respiration labored and slow, without marked stertor, the noise emitted being of a sighing character. The breath was cool and odorless; the eyes fixed, and the pupils normal in size and non-responsive. The limbs responded to the prick of a pin. Muscular tremors were constant and lasting, and fluctuated in intensity. Auscultation of the chest, interfered with by the tremors, failed to disclose abnormalities in the sound of the heart or lungs. Urine was abundant, slightly alkaline, pale, and showed albumen. Attempts to vomit appeared to be made. The bowels were not evacuated previous to the administration of an enema. About two hours and a half after the patient was brought to the hospital there was a sudden and fatal exhaustion, the heart continuing to flutter after respiration ceased.

The post-mortem examination was made twelve hours after death. Rigidity was still strong. The body was found to be well nourished, and rather muscular for its age. The pleura was normal; the lungs normal in structure, crepitating all over, the section showing congestion and exuding blood. The stomach was empty and its veins turgid; the liver enlarged and congested, as were all the abdominal organs. The kidneys were about $3\frac{1}{4} \times 1\frac{1}{4}$ inches, red, congested, and moderately hard; the capsule stripped easily, showing the exposed surface smooth; the renal arteries were tough and atheromatous. The right kidney had a small cyst. The brain dura was normal, the sinuses overfilled with blood; the left lateral ventricle filled with dark soft coagula, supposed, after careful search, to be due to laceration of that side of the brain by the chisel; the other ventricles contained neither blood nor appreciable amount of fluid. The brain was slightly pale, but of good consistency; the arteries at the base, including the vertebral, were thickly studded with atheromatous patches (specimen). At the first division of the right posterior cerebral a hard freely movable plug was found. The shock resulting from the sudden interference to the circulation by this plug, in an already poorly nourished brain, was credited as the cause of death.

The heart presented as a specimen weighs 11 ozs. The aortic valves were found barely separated, and immovable either way, these and the mitral allowing a free backward flow of water. The valves are now rigid and covered with large friable warty calcifications. The mitral valves are hard, the aortic curtain being fully $\frac{3}{16}$ of an inch thick, and there are inflammatory patches at their junction. The aorta and coronary openings present atheromatous patches. The left ventricle is not dilated, and only ½ inch in thickness. The auricle is dilated, its walls normal, and the lining opaque and contracted. Neither cavity of the right side is hypertrophied, though the tricuspid valve is slightly thickened.

It is strange that these changes in the heart were not accompanied by any adequate compensation, and yet did not occasion any disorder in the patient's system, so as to materially affect his health, or manifest itself by any of its many symptoms.

MEDICAL PROGRESS.

RADICAL CURE OF INGUINAL HERNIA.—At the late congress of Italian surgeons, March, 1888, PROF. BASSINI described a new method of treatment in inguinal hernia, which he had successfully practiced in 102 cases. He asserts that Wood's and Zerny's operations, which have for their object the closure of the canal by cicatricial tissue, expose the patient to recurrences of the hernia unless a truss is constantly worn. This does not occur in his operation, which restores the inguinal canal to its normal conformation. His procedure is as follows: He lays bare the aponeurosis of the external oblique muscle, and cuts through it from the external ring to the internal. The neck of the hernial sac is then separated from the spermatic cord and tied or sutured at the situation of the internal ring; it is next divided and the ligated part returned to the abdominal cavity. After pushing aside the spermatic cord, the posterior margin of Poupart's ligament is exposed, and the musculo-aponeurotic layer consisting of the internal oblique and transversalis muscles, and the transversalis fascia dissected off from the subserous stratum in such manner that it can be brought in close apposition to the posterior margin of Poupart's ligament.

These parts are united by sutures for a distance of five to seven centimeters, commencing externally at the ileopubic tubercle and extending to the place where the spermatic cord enters the abdominal cavity. The cord is next replaced, and the aponeurosis of the external oblique sewn up, an opening being left that is large enough for the cord to pass through without compression. The cutaneous wound is then closed after providing for drainage. This operation restores the inguinal canal to its natural condition; the internal opening and the posterior wall are new-formed, while the external ring is merely narrowed. Moreover, the canal is restored to its normal oblique position, so that the posterior wall which is pressed forward by the intra-abdominal pressure is supported by the anterior, and the canal thus permanently closed. Another advantage claimed for Bassini's method is that the new-formed posterior wall, which is composed of muscle and aponeurosis is permanent, and will not disappear like the cicatricial plug in Wood's operation. Of the author's 102 cases, 95 were reducible and 7 strangulated herniæ; in 98 the hernia was complete oblique, and in four complete direct.

The following conclusions are formulated:

1. The method is absolutely without danger.
2. It effects a radical cure in a short space of time.
3. It obviates the necessity of wearing a truss, as after the other operative procedures.—*International Journal of Surgery and Antiseptics*, July, 1888.

COMMUNICABILITY OF ACTINOMYCOSIS.—Since Dr. Israel first described actinomycosis in 1878, there have been, according to DR. BARACZ, of Lemberg, 103 cases published. Dr. Baracz himself has met with two cases which apparently show that there is a possibility of the affection being communicated from one person to another. The first to be affected was a livery-stable keeper. His horses were all, however, in good health, and he had not had charge of any strange horses. When seen by Dr. Baracz on January 9, 1887, a tumor was found on the external surface of the left ramus of the lower jaw; it was about the size of a walnut, fluctuating, easily movable over the bone, and presented an indurated border; the skin over it was inflamed; the teeth were much decayed and very black. Two incisions were made into the tumor, and it was proposed to scrape it thoroughly out. To this, however, the patient refused his consent. The contents on microscopical examination proved to be, as was suspected from the first, of an actinomycotic nature. The wounds were dressed with iodoform, and had quite healed on March 3. On July 15, the *fiancée* of the former patient presented herself with an abscess of the alveolar process of the left jaw. Behind the abscess was a somewhat tender, hard tumor, the size of a hen's egg, but flattened, intimately connected with the inferior maxilla. Many of the teeth were gone, and those that remained were very defective. On opening the abscess, half a teaspoonful of pus was obtained, from the examination of which a diagnosis of actinomycosis was established. The wound healed readily. Two months later, a second abscess, the size of a hazel-nut, was found in the gum over the first molar, which was carious. This, as the patient refused to allow it to be opened, broke and ultimately healed without trouble. As there was no microscopical examination of the contents of the second abscess in the case of the young woman, it cannot be regarded as certain that this was of a parasitic nature.—*Lancet*, July 28, 1888.

RESECTION OF THE OPTIC NERVE INSTEAD OF ABLATION OF THE EYEBALL. — DR. CHARLES BELL TAYLOR says: Notwithstanding the great advantages obtained by the substitution of enucleation for the ancient and formidable practice of scooping out the whole contents of the orbit, it is clearly impossible to accept this operation as a final solution of the difficult problem of how to deal with a lost eye. The operation of exenteration, the substitution of a glass vitreous chamber, and the late Mr. Streatfield's proposal to destroy the whole conjunctival surface in certain cases after enucleation, is evidence that modern surgeons are not satisfied with the existing state of things. Atrophy of the orbit and neighboring tissue frequently follows enucleation; the glass eye excites traumatic conjunctivitis, and if the artificial substitute is withheld the orbit retracts. To a working-man the annual expense is onerous, the glass eye a perpetual annoyance, and an empty orbit a constant receptacle of foreign bodies. Nevertheless, when the eye is crushed, contains a foreign body or neoplastic growth, or belongs to a patient who cannot be trusted to take care of himself, or to return if threatened with sympathetic ophthalmia, it is best to remove it. If, however, although sightless, the eye is a good-looking organ, and only affected with neuralgia or recurrent inflammation, or belongs to a patient who refuses enucleation, it is best to excise a portion of the optic nerve, which is quite as effectual as enucleation, and has the great advantage that it does not sacrifice the eyeball, or render an artificial eye necessary.

In thirty-one cases the author has obtained the most gratifying results from this operation. Motion in all directions is perfect, and, in fact, in some of them it is difficult to tell which eye has been done.—*Brit. Med. Jour.*, July 28, 1888.

AMYLENE HYDRATE.—DR. F. GIRTLER, assistant in the Medical Poliklinik at Königsberg, gives additional details on the influence of amylene hy-

drate, the new hypnotic introduced by von Mering. He had tried the drug in sixty-one cases of various diseases, with results which fully confirmed those of von Mering and Sacharschmidt. He administered it in the following forms: 1. ℞. Amylene hydrate, 7 grams; distilled water, 40 grams; syr. rubi idæi (raspberry), 30 grams. Sig. Half the quantity to be taken in the evening. 2. ℞. amylene hydrate, 7 grams; aq. menthæ piperitæ, 40 grams; syr. rubi idæi, 30 grams; olei menthæ piperitæ gutt. 1. Sig. One-half the quantity to be taken in the evening. In the case of children the remedy was given in the form of pills or in gelatine capsules as recommended by von Mering. The average dose for adults was 3.5 grams; sometimes smaller doses were sufficient, but at certain times larger doses, such as 6 grams, had to be resorted to. In the case of children under 1 year of age the dose was 2 decigrams, and in older ones 6 decigrams. In almost all cases the desired effect was obtained; deep sleep lasting the whole night supervened in some irritable cases; in other instances, however, the sleep only lasted some hours. In a few cases headache and slight oppression were complained of, but there was no vomiting. The drug was tried in chronic alcoholism, softening of the brain, chronic morphinism, epilepsy in which the night's rest was broken by frequent attacks of cramp; in tuberculosis, gastric ulcer, rheumatism, and tabes; the lancinating pains in the latter disease diminished under the influence of amylene hydrate. Dr. Girtler prefers the drug to chloral hydrate, as it has no injurious effect on the heart.—*Berliner Klinische Wochenschrift*, No. 6, 1888.

Cancer and Tuberculosis.—Lubarsch has written a paper in *Virchow's Archiv*, February, 1888, on "Primary Cancer of the Ileum," in which he comments on the simultaneous presence of cancer and tuberculosis. He has examined two cases of cancer of the ileum, which he has carefully compared with œdematous polypoid tumors of the small intestine. He comes to the conclusion that cylindroma of the intestine may be truly carcinomatous; that primary cancer of the ileum arises from Lieberkühn's follicles; and that in epithelial new growths, not otherwise cancerous, ingrowths of epithelial cells, atypical in that they bear no basement membrane, are sometimes to be detected. Lubarsch then reviews at great length the various theories on the possible relations of cancer and tubercle. He believes that their precise relation is very difficult to define in any practical manner; for the different ages at which each disease appears make their coincidence very rare. The theory that cancer of any particular organ predisposes it to tubercle, as Lebert asserted in respect to the œsophagus, is not proved. In cancerous subjects, as in phthisis, acute forms of infections are relatively rarer than in persons free from cancer. Tuberculous affections may, it cannot be denied, favor the development of a cancer, just as carcinoma frequently appears on an area exposed to chronic irritation. Both of Lubarsch's cases were middle-aged men, and in both "peribronchitis caseosa" and other evidences of tubercle were detected after death.

Influence of Nutrition on Mother's Milk.—Zaleski found that a portion of the milk taken from a wet-nurse contained 6 per cent. of fat—double the usual quantity. The child suckled by this nurse was in a very bad state of nutrition, suffered from diarrhœa and loss of weight, and the milk given it was scarcely digestible. Zaleski believed that these disturbances were due to too great concentration of the milk, the nurse being fattened by a too free use of beer and too little exercise. A change of diet, moderate use of meat, dilution of the beer with water, and abundant exercise in the open air led to a diminution of the quantity of fat in the milk and an increase in milk-sugar. From that time the child began to improve, and thrived well. The conclusions drawn from this case, and from experiments upon cows and other animals, were:

1. Woman's milk which is very rich in fat can have a very harmful effect upon the nutrition of a child who feeds upon it.

2. A diet which is composed almost exclusively of albuminous elements will increase to a perceptible degree the fat in woman's milk, diminish the quantity of milk-sugar, and has a bad effect in other ways; a similar result may follow the use of alcoholic liquors.

3. By proper diet and nutriment a desired condition of the milk which is indispensable for the proper nutrition of the child can be obtained within certain limits.

4. The influence of the general condition upon the milk supply is the same in human beings as in animals.

5. The fat in milk is probably obtained, to a considerable extent, either directly or indirectly, from albuminous foods.—*Centralbl. für Gynäk.*, May 26, 1888.

Infuence of Drugs Taken by Nurses upon Nurslings.—Fehling has made investigations upon this subject as follows:

Soluble substances pass from the blood into the milk. Sodium salicylate became dangerous to an infant after its nurse had taken 45 grains; iodide of potassium may be given in daily doses of 3 grains without injury; it was found in the milk twenty-four hours after the nurse ceased to take it. Potassium ferrocyanide does not pass readily into the milk.

Iodoform, even when applied externally to the mother, passes very readily into the blood, and affects the child more powerfully than when it is

applied to lesions upon the child. Mercurials given to the mother do not affect the child readily.

Regarding narcotics, twenty-five drops of tincture of opium (German Phar.) did not affect the child; he concludes that from one-tenth to three-tenths of a grain of morphia may be given at a dose with safety to the child; from 20 to 40 grains of chloral may be likewise given. If the breath was withheld for one and a half or two hours after these doses no effects on the child were observed. Atropia affects the child very readily and powerfully.

Fehling experimented with citric acid, mineral acids and vinegar, finding that their use does not affect the child; the normal alkalinity of the milk remains undisturbed. No restriction in this direction should be put on mothers' diet.

As to the influence of fever upon the milk, the septic-fevers counter-indicate nursing, because the milk ducts and secretion are infected with micrococci. The child should be at once taken from the breast in these cases. In non-septic fevers the child should nurse so long as the secretion remains, and simple means should be used to abate the mother's fever.—*Medical Press*, May 9, 1888.

THE EXPLORING NEEDLE IN DIAGNOSIS.—DR. HERMANN M. BIGGS, at the close of a paper on the accidents incidental to the use of the exploring needle in diagnosis, draws the following conclusions:

1. The employment of the exploring needle is not infrequently attended by considerable danger, and a number of deaths have directly resulted from its use.

2. The indiscriminate, careless, and routine resort to exploration with a needle should be condemned. This procedure should not be resorted to without careful consideration of the conditions obtaining in each case, and the results that may follow the puncture. The site for the puncture should be thoughtfully chosen, the puncture carefully made with complete antiseptic precautions, and the smallest needle that will answer the purpose employed.

3. The puncture of collections of fluids with tense walls in relation with serous surfaces should be, as far as possible, avoided, and, if it is resorted to, sufficient fluid should be withdrawn to relieve the tension upon the walls of the sac. In many cases certainly an exploratory operation would be attended by less danger.

4. In the introduction of the needle into deeply seated infectious matter the nature of the intervening tissue should be carefully considered.

5. The needle before use should always be thoroughly disinfected, preferably by heating in the flame of an alcohol lamp or a Bunsen burner.

6. The skin where the puncture is to be made should be rendered thoroughly aseptic by first scrubbing with soap and water, and then washing with an antiseptic solution.

7. The dangers attending the use of this valuable adjuvant in diagnosis should not in the slightest interfere with its employment in properly selected cases, where due precautions are observed as to its use.—*N. Y. Medical Journal*, August 18, 1888.

OINTMENT OF THE NITRATE OF MERCURY IN BOILS AND FELONS.—During the last six years DR. ROBERT KENNER has used successfully this preparation as an abortifacient of boils and felons. He claims that through its agency he has been able to abort nearly all cases that came under his care before suppuration had commenced. The application of the ointment is not painful, and in about twelve hours is followed by a peculiar drawing sensation, after which there is a complete cessation of all uneasiness. In treating felons the entire finger should be covered with a coating of the ointment about one-eighth of an inch thick, and then enveloped in a piece of thick sticking-plaster. This dressing is allowed to remain for twenty-four hours, after which time further treatment is unnecessary.—*Therap. Gaz.*, June, 1888.

MASSAGE IN EMBOLISM OF THE RETINAL ARTERY.—At the meeting of the Ophthalmological Society of the United Kingdom, on July 6, DR. MULES related the case of a young woman, aged twenty-one, who perceived a blank over a portion of the upper segment of her right visual field. Within an hour she was at the Manchester Eye Hospital. Her right visual field was found contracted above. Seen under direct ophthalmoscopic examination, the fundus showed a blocked lower retinal artery, the clot, which was colorless, being visible, and extending from the entrance on the disc to the first bifurcation; the plugged vessel looked as if it had been stuffed with cotton wool. The retina was slightly œdematous. Massage was tried, and the clot disappeared, sight at once improved, and the vessel was seen well filled.—*British Med. Jour.*, July 21, 1888.

CHRONIC ABSCESS IN THE STUMP AFTER TONSILLOTOMY.—NOQUET reports this rare case: The patient was a married woman, æt. 20 years. In infancy she had been the subject of hypertrophy of the tonsils. The right tonsil was removed when the patient was six years old, and the left about six months before she came under treatment. The left stump was very red and markedly hypertrophied at the border of the palatine folds, and on pressure pus exuded from a fistula. About a teaspoonful of pus was evacuated by an incision with the galvano-cautery, and after several cauterizations the patient was cured.—*Revue Mens. de Laryngologie*, July, 1888.

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SATURDAY, SEPTEMBER 8, 1888.

THE MEDICAL EXAMINING BOARD OF VIRGINIA.

At the examinations held by this Board in April, 1888, there were 34 applicants, 1 of whom withdrew. Of the remaining 33, 26 passed and 7 were rejected—22.22 per cent. Of the 33 applicants 30 were graduates; of the 7 rejected all were graduates; of the 3 undergraduates all passed. Three colored students applied, and 2 passed. The 30 graduates came from 11 colleges; from 6 colleges all the applicants, 21 in number, passed; from 5 colleges 7 out of 12 applicants—or 58.33 per cent.—were rejected.

The last report of the Virginia Examining Board gives a list of the colleges from which graduates have come before it for examination. The table shows that since the organization of the Board, January 1, 1885, there have been 223 applicants in all, 49 being rejected—21.97 per cent. Of the applicants 212 were graduates; 45 were rejected—21.69 per cent. There were 11 non-graduate applicants, 4 of whom were rejected—36.36 per cent.—and 2 had not completed their examinations at the time of the report. In the table are given the names of 27 colleges from which applicants have come before the Board; excluding the University of Heidelberg, we have 26 American colleges; 13 of these sent 51 applicants, all of whom passed; 13 others sent 156 applicants, with an average of 34.73 per cent. of each rejected—more than one-third.

Following is the rejected-percentage list: Medical College of Virginia, 54 applicants, 7 rejected, 12.98 per cent.; University of Maryland, 33, rejected 8, 24.24 per cent.; College of Physicians and Surgeons of Baltimore, 33, 10 rejected, 30.3 per cent.; Jefferson Medical College, 12, rejected 3, 25 per cent.; Bellevue Hospital Medical College and the University of the City of New York, 5 each, rejected 1 each, 20 per cent.; Vanderbilt University, 3, 1 rejected, 33.33 per cent.; Medical Department of Howard University, 7, rejected 6, 85.71 per cent.; Louisville Medical College and Detroit Medical College, 2 each, 1 each rejected, 50 per cent.; Columbus Medical College, 2, Medico-Chirurgical College of Philadelphia, 3, and Cincinnati Medical College, 1, rejected *all*, 100 per cent. And there are still other interesting figures to be had from the table. Of the 45 rejected graduates, 21, or 46.66 per cent. (from 8 colleges) applied for a second examination; of these 9, or 42.85 per cent., failed a second time. We thus see that the Board held 228 examinations of graduates of American colleges, and rejected 23.68 per cent. Can any one wish for better proof that the colleges (as a class) are not regulating themselves, but need regulation, and a great deal of it.

The percentage of graduates to matriculates in American colleges now averages 30.5. The average for the colleges whose students failed before the Virginia Board is 34.12—3.62 per cent. higher than the general average; for the colleges whose students passed, 28.53—1.97 per cent. lower than average. The colleges whose graduates failed, then, graduate 5.59 per cent. more of their matriculates than the colleges whose graduates passed. Colleges whose graduates failed average 2.07 courses of 22.44 weeks each; others 2.61 courses of 25.84 weeks each. Average for American courses is 24.9 weeks; average course of colleges whose candidates failed is 2.46 weeks less—of others .14 week more, or 3.46 weeks longer than the course of the other colleges.

By leaving out of consideration the colleges from which not more than one candidate came, we have: Colleges all of whose graduates passed, 7; colleges some of whose graduates failed, 12; number of students from former 42; from others 142. Of the last 98 passed, 44 rejected—30.92 per cent.; applied a second time 21, rejected second time 9—42.85 per cent. From these colleges, then, 163 applied, 53 rejected—32.51 per cent.

More specifically, 100 per cent. of second applicants from 4 colleges—total of 7; 100 per cent. failed from 2 colleges—total of 6, 100 and 50 per cent. having previously failed from these colleges; 33.33 and 40 per cent. of second applicant failed from two other colleges. Of the colleges sending more than 1 candidate, graduates of which failed, the per cent. of graduates to matriculates is 34.4; others (7) 28.57—average for United States 30.9.

Counting first and second applicants, we see that 228 graduates were examined, and 54 failed —23.68 per cent. From 1877 to 1887 inclusive there were 36,097 graduates from medical colleges of the United States. They held documents that are considered as entitling to practice in the majority of our States and Territories. But according to the above figures, if these 36,097 had gone before an efficient examining board, *8,300 would have been rejected!* About 1,400 more than there are physicians in Illinois now! It is appalling to think that in ten years more than twice as many incompetents have been graduated from the medical schools in the United States as there have been graduates during any one of these ten years, except the session of 1881–82, when there were 4,450 graduates. Yet we are told: "Let the medical colleges alone; they will regulate themselves;" "Medical legislation is class legislation;" "It is not in accordance with the spirit of our National institutions and precedents to meddle in these matters." "Supply and demand will regulate the matter;" and other things that are disdisproved by the time they are uttered.

It is a matter of regret that the report received from the North Carolina Board of Medical Examiners, a *résumé* of which was published in THE JOURNAL last week, did not contain a table similar to that given in the Virginia report, for it is probable that some interesting information could be obtained from it. A table of this kind, compiled from the reports of all the examining boards in the country, and the reports of State Boards of Health that hold the licensing power, would furnish some interesting reading both for the general public and for the profession, though it would doubtless be distasteful to some professors. It should be borne in mind that both in North Carolina and Virginia the examiners do not know the student or applicant except by the number given by the secretary; so there can be no charge of favoritism. In States in which there are no medical practice acts, nor examining boards, or inefficient ones, we cannot think of any argument that should be more potent with legislators than one of these tables.

It is proper to inquire how the Medical Examining Board of Virginia stands with the profession of the State. There are two medical schools in Virginia; the University, and the Medical College of Virginia. Since the organizatlon of the Board 28 students of the former have come before it, and all passed; 54 students of the latter have applied, and 87.02 per cent. passed; add to this number 3 that applied a second time, all of whom passed, and we have 57 applicants, 50 passed, which raises the percentage to 87.71. When the first movement was made towards securing the present legislative enactments, the Faculties of the University of Virginia and of the Medical College of Virginia heartily endorsed it. But after the Board was organized and began to work with that thoroughness and impartiality that has always characterized its work, oxen began to be gored, though the Board did not know whose they were till the Secretary made his report *after* the results of the examinations had been determined. During the last session of the Virginia Legisiature a petition was sent in from the students of the Medical College of Virginia, asking that the graduates of Virginia schools be exempt from the examination before the Board, and be entitled to a license on their diplomas. On January 11, 1888, a majority of the members of the Faculty of this college, and a number of the students, appeared before a committee of the Legislature, to express their entire belief in and approval of examining boards in the abstract, and their sincere disapproval of any examination of the graduates of the Medical College of Virginia. The Faculty of the University of Virginia, however, and its students, and the medical profession of the State of Virginia continue to approve of the Board both in the abstract and the particular concrete.

The petition sent to the Legislature by the students of the Medical College of Virginia is worthy of some notice, as showing to what lengths misguided people can go, and what statements they can make. A round dozen "reasons" were given why the Legislature should grant the petition: *First*, it was stated that the students of Virginia colleges pay more for their tuition than they would have to pay elsewhere; which is untrue, as can

be seen by comparing college catalogues. *Second*, they claimed that the Board was hostile to their institution, notwithstanding the fact that members of the Board know the applicant by number only. *Third*, they cite that some of the States (New York, Maryland, Pennsylvania, Ohio, etc.) have rigid laws in regard to medical practice, but *protect their own medical colleges* by recognizing the diplomas of these colleges as a sufficient guaranty of the graduate's fitness to practice medicine. This is a new application of the much-mooted question of protection. But the statement with regard to the laws in these States is only partly true, and what is true is shown to be wrong in principle and application by the rejected-percentage list given. *Fourth*, it was stated that the Virginia Board was selected at random; it is not and has never been. It is selected by the Medical Society of Virginia, an organization representing the best element of the profession in the State, and more than one-half the profession in the State. The *fifth* "reason" needs no answer. It reads: "The sole object of the law regulating the practice of medicine and surgery is a selfish one—*i. e.*, to prevent competition. Medicine is studied and practiced for the sake of profit and gain, and *not* for 'sweet charity's sake.' . . . Competition is the life of this, as well as of other trades." Sober reason is utterly lost on medical students that can argue in this manner. The *sixth* and *seventh* reasons are that the examinations are a tax on the poor student; but the Board meets when the colleges close, and the fee for the examination is only $5.

The *eighth*, *ninth*, and *tenth* reasons were that the facilities of the Virginia schools for teaching are excellent, that the graduates of the Virginia colleges have invariably distinguished themselves (until they fell into the hands of the State Board), and that the failure to pass the Board's examinaiton casts a stigma upon the graduate, while to pass it does him no good. Grant all this for a moment; but the following answers by *graduates* before the Virginia Board are sufficient to show that though a stigma may be put upon a graduate when he fails to pass, the people of the State are protected from an incompetent practitioner:

Describe the larynx. *Ans.* The larynx is composed of cartilage. The œsophagus passes through the larynx.

What is the function of the liver? *Ans.* Do not know.

Give tests for arsenic. *Ans.* Sulphuretted hydrogen is one. Don't know rest.

Give test for mercury. *Ans.* Do not remember.

Give dose of tartar emetic. *Ans.* Ten grains.

Give dose of sulphate of atropia. *Ans.* Hypodermically, 10 grains; by mouth 60 grains.

Give dose of corrosive sublimate. *Ans.* One grain.

How would you treat placenta prævia? *Ans.* I don't know what it is.

Give dose of powdered cantharides. *Ans.* Forty grains.

What is the source of iodine? *Ans.* It is dug out of the earth in blocks like iron.

Describe dengue or break-bone fever. *Ans.* By four applicants: A fever that comes on soon after the bones are broken. By one applicant: The patient should be cautioned against moving, for fear the bones should break.

Describe the peritoneum. *Ans.* It is a serious membrane lining the belly, and extending into the chest, covering the heart and lungs.

Admitting only for a moment, and for the sake of argument, that medicine is a trade, as that committee of students would have had the Legislature believe, every one must admit that a tradesman should at least know the names of the tools with which he is to work, and the names, functions, and diseases of the mechanism upon which he is to exercise his trade. Otherwise, he is unfit to be in the trade.

So far as we can learn, the only medical men in Virginia that are opposed to the present law and the Board of Medical Examiners, are those composing the Faculty of the Medical College of Virginia. Doubtless they are warmly supported by the Faculties of some colleges outside the State, as given above. Had not the State Medical Society and the majority of the physicians of the State endorsed the Board and the law creating it, we may be sure that no Legislature would have ever created it. The Board is doing good work, and is impartial in its work; the colleges that are placed in a bad light by the examination statistics of the Board have it in their power to mend matters by doing better work.

MODERN ANTIPYRETICS IN REMITTENT FEVER.

SURGEON P. O. W. HALLEY, of the Indian Medical Service, records some cases, in the *Indian Medical Gazette* of June, that well illustrate the action of some of the recently introduced antipyretics. These cases were nearly all of the adynamic type, and were treated throughout with small doses of tincture of digitalis as a cardiac tonic, and with quinine during the remissions, and stimulants as required. In one case antifebrin pro-

duced a very marked fall of temperature twice, of 5.2° and 4.4° respectively, without causing symptoms of depression otherwise than a slight slowing of the pulse and reduction of pulse-tension. When given in brandy it produced very little depressing effect, and Mr. Halley says that a dose of 7 grains is usually effectual. In a second case, severe and complicated with pneumonia, antifebrin caused less depression than antipyrin, and lowered the temperature as effectually. The average time taken by the antifebrin to lower the temperature was from one to two hours. The effect on the skin was greater than that of antipyrin. The temperature remained down for from 5 or 6 to 8 hours. The urine was slightly increased on one or two occasions, but not markedly so. Neither antifebrin nor antipyrin caused any vomiting nor collapse in these cases.

In summing up as to the value of the modern antipyretics in remittent fever Mr. Halley says that kairin is undoubtedly inferior to the others, inasmuch as in large doses it may produce dangerous depression, and if given in small doses its effects are uncertain. Furthermore, it seems to be pretty clear that part of its action is to cause disintegration of the blood-discs, and it is therefore evidently unfit for continual use. Antifebrin is doubtless superior to antipyrin, both as regards its power of reducing temperature, and the absence of after-effects. Mr. Halley thinks that the routine use of antipyrin in adynamic fevers, especially the severer remittents and typhoid fever, in which there is such proneness to degeneration of the cardiac muscle, must be fraught with great danger, but if given only when the temperature exceeds a certain height it is undoubtedly a useful drug, more especially if the cardiac muscle be kept in tone with small doses of digitalis or strophanthus throughout the disease. When it becomes necessary to use one of these drugs almost continually, he thinks antifebrin is superior to antipyrin for the reasons given.

EDITORIAL NOTES.

PRISON REFORM is needed in the Northern Indiana Prison at Michigan City, if there be any truth in some reports from this place printed in the newspapers last week. An ex-convict, just released, tells a terrible story of suffering, abuse in, and mismanagement of the institution. He says that the pork furnished the prisoners during the past summer was frequently so badly spoiled that they could not eat it. According to his story medical assistance is not promptly rendered in cases of sickness, one prisoner, who had been in prison for seven years, and who was to have been released in a short time, having died of simple neglect, being found dead on the stone flagging of his cell after having called in vain for assistance. "The severest punishment from which the convict suffers," says the ex-convict," "is hunger and filth." Statements of this kind demand the fullest investigation by the authorities, and if true, some one should be punished and reform instituted.

A MYSTERIOUS DISEASE has appeared in Rogers City, Mich., according to recent dispatches, which say that two weeks ago a mysterious malady attacked several persons in that village, and its ravages have grown to such proportions that a panic has seized upon the people. The disease somewhat resembles cholera, and attacks all classes without regard to the conditions which surround them. The bowels are first affected. This is followed by a black vomit, and ordinarily death ensues in thirty-six hours. There have been as many as nine deaths in a single day, and the disease is spreading. Physicians are wholly at a loss as to how to cope with it, the usual cholera remedies having no appreciable effect. The authorities will have an investigating committee from the University of Michigan look into the cause of the epidemic.

KALA-AZAR is the name of a dread malarious fever that occurs in the districts of Goalpara and the Garo Hills of the Province of Assam. In the last Administration Report it is shown that this disease was the cause of nine out of twelve suicides, and the Chief Commissioner confesses with regret that all that human skill can do seems to be useless in combatting this dreadful disease, and the Deputy Commissioner says: "The miserable lot of a sufferer from kala-azar can hardly be surpassed under any conditions of time or place; treated as the possessor of a contagious and infectious disease, a drone in spite of his will, and his existence as such resented; growing weaker and weaker with each succeeding month, in constant pain, it is not to be surprised that the wretched creature should seek his end."

DEGREES IN SANITARY SCIENCE.—In the United Kingdom the opinion is becoming more prevalent and popular that medical officers of health should hold degrees in sanitary science, in addition to their medical degrees. The University of Madras has now instituted a degree in sanitary science. The candidate for the degree must have passed the examination for the degree of M.B. and C.M., or L.M.S., and must present certificates of having attended courses in hygiene (not less than forty lectures), general pathology (not less than forty lectures), analytical chemistry (practical course of not less than six months) and one course of sanitary engineering. The candidates are examined in organic, inorganic, and practical chemistry, experimental physics, vital statistics, general pathology, including bacteriology, hygiene, sanitation and sanitary engineering, and drawing and mensuration.

TYPHOID DISEASE IN CALDWELL, OHIO.—A dispatch from Caldwell, Ohio, states that for about a month an epidemic disease having some of the characteristics of typhoid and malaria has been prevalent in the town. The population of the place is about 1800. Cases of the disease have occurred in almost every family, and 25 deaths have occurred. Caldwell, it is said, has no drainage to speak of, and it is thought that the disease is due to bad water. The dispatches state that no strangers visiting the town have been attacked. The above death rate in a city the size of Chicago would represent 17600 deaths in a month, or one-sixth of the whole population in a year. Yet some people cannot see the necessity of paying out the money of the people for boards of health.

HUMAN AND ANIMAL BLOOD.—DR. PESETY CEVERA claims that human may be distinguished from animal blood by the following method: If the blood be mixed with a little bile, small crystals are formed which are of different shapes in different species of animals. In man, it is claimed, they are right-angled prisms; in the horse cubes; in pigs right-angled prisms very similar to those seen in rhomboids; in sheep rhomboidal plates; in dogs the same as seen in human blood; and in chickens more or less regular cubes.

AUTOPSY ON POISONED ANIMALS.—The Surgeon-General of the Indian Medical Department has decided, and the Local Government sustains his decision, that a medical officer should not be called upon to perform an autopsy upon an animal that has been poisoned (to the extent of performing the work with his own hands), but that it is his duty to examine the viscera and report upon the facts; though if a veterinary surgeon can be had it would be more satisfactory to have him perform the duty. The case in point was that of an Assistant Surgeon at Madura, who refused to make an autopsy on a buffalo supposed to have been poisoned, on the ground that he was not a veterinary surgeon.

DR. JOSEPH TEFFT, died at his residence in Elgin, Illinois, August 26, 1888, from Bright's disease, at the age of 76 years. Dr. Tefft graduated in the Medical School at Woodstock, Vt., in 1832, and became one of the first settlers in the town of Elgin in 1835, where he not only acquired an extensive practice in his profession and maintained it for more than fifty years, but he became actively interested in every important interest affecting the community in which he lived, and retained his position as a leading and upright citizen to the time of his death.

DECLINE OF SMALL-POX IN ENGLAND.—DR. HENRY THORNE has called attention to the fact of the gradual decline of small-pox in England in the past 50 years. From 1838 to 1842 the deaths from small-pox in England amounted to 57.2 per 100,000; in 1880–84 the death-rate was 6.5 per 100,000. He thinks that vaccination has not only a direct influence in causing this reduction in the number of victims to small-pox, but that it has also a tendency to decrease the liability to the disease of children of vaccinated parents.

MEDICAL WOMEN IN ENGLAND. — Twelve students of the London Medical School for Women have recently passed the intermediate examination for the M.B. degree of that most exclusive body the University of London, which is ample proof that the London School for Women is doing good work, and that its students are preparing themselves thoroughly for the duties of the profession.

THE LARGE MORTALITY OF CENTENARIANS, as shown by the reports in the daily papers, threatens to leave this country, in a short time, without a single person one hundred years old.

FOREIGN CORRESPONDENCE.

BRITISH MEDICAL ASSOCIATION.
Fifty-Sixth Annual Meeting.

[EDITORIAL CORRESPONDENCE.]

Branches—Members—Financial Condition—Reports of Committees—Scientific Grants Committee—Collective Investigation Committee—The President's Address—Address in Medicine—Dr. MacEwen's Address—The Address in Physiology—The Sections and Section Work—The Entertainments—The Dinner.

The Fifty-sixth Annual Meeting of the British Medical Association was held in the halls and class-rooms of the University of Glasgow, commencing August 7, 1888. As is usual, a regular meeting of the Council was held in the Randolph Hall at 9:30 A.M., for members of the Council only. At 11:30 A.M. the first general meeting of the Association was held in Bute Hall, to hear and act upon the reports of the Council. Dr. J. G. Banks, of Dublin, President for the preceding year, took the Chair, briefly alluded to the prosperous condition of the Association during the year, returned thanks for the honors he had received, and introduced the President-elect, Dr. W. T. Gairdner, of Glasgow, who took the Chair and was greeted with much applause. Dr. Cameron, after a highly eulogistic speech, moved a vote of thanks to Dr. Banks for the able and courteous manner in which he had presided during the past year, which was seconded by Sir Geo. B. MacLeod, and adopted with much enthusiasm. Dr. Thomas Bridgewater, President of the Council, presented a general report of the doings of that body, embracing a variety of topics. Several new branches had been added during the year, one of which was in Ceylon, and one in Nova Scotia. The latter is the first branch formed in British North America and contains thirty-three members. The total number of members on the register of the Association at the beginning of the year was 11,107. Of these 359 have resigned, 132 have died, while 1,649 have been added, making the total number of members at date of the report 12,265. The net increase of 1,158 was mostly from the medical officers of the Army and Navy, who are receiving the active influence of the Association in procuring from Parliament such legislation as will give them proper relative rank and position in their respective departments of military service. The same report gave the total income for the year as £28,680 0s. 3d. and the total expenses £26,060 17s. 8d., leaving a balance of £2,619 2s. 8d. Of the total expenditures, £20,285 2s. 4d. were on account of the publication of the *British Medical Journal*. The adoption of the report was moved by Dr. Bridgewater and seconded by Drs. Holman and Morton, and was adopted without opposition. Dr. Morton took this occasion to urge upon members the duty of attending the several Sections and giving proper attention to the papers that had been prepared with much care by their authors.

Dr. Ernest Hart, Chairman of the Committee on Parliamentary Bills, gave a synopsis of the work done and the various bills and motions pending in Parliament relating to medical matters and moved the adoption of the report of the Committee.

Dr. Farquharson, M.P., in seconding the motion thought the time had come when all the influence possible was needed to sustain the interest of the Medical Department of the Army and Navy. He thought there was danger of the adoption of measures for diminishing the medical staff and lessening its emoluments. To prevent this was more important than the question of relative rank.

Surgeon-Major Ince made some criticisms on the Local Government Bill, mentioned in the report, and regarding the question of military rank in the Army he thought the Association was more likely to do harm than good. After some remarks having the same bearing by Dr. Fitzpatrick the report of the Committee was adopted.

Dr. Norman Kerr, Chairman of the Inebriates' Legislation Committee, made the annual report, showing some improvements in the Act regarding the treatment of inebriates, and much of general interest on the subject. Dr. Long Fox moved the adoption of the report. Dr. Eastwood seconded it, and the report was adopted with applause.

The report of the Scientific Grants Committee was presented by Prof. McKendrick, in the absence of the Chairman, Sir Joseph Lister, and in moving its adoption he said that during the past few years the Association had done good work by the expenditure of small amounts, and very important and valuable contributions had been made to science. Every care was taken to ascertain the nature of the investigations proposed and the qualifications of the gentlemen who made them. The Committee did not limit its operations to the giving of grants to gentlemen in laboratories throughout the country, and it was satisfactory to know that several very important reports had been made by men connected with no great educational or scientific institution, but men engaged in ordinary practice. The money was paid only for apparatus, chemicals, etc. They must not be disappointed at those investigations not leading to the discovery of any great or striking truth. A very large amount of scientific work consisted in the accumulation of details. It was given to only a very few to come upon any striking fact of generalization, but a contribution, however humble, made with the aid of scientific grants, was a contribution to the upbuilding of that temple of

science in which they were all so interested and of which they were all so proud. Surgeon-General Maclean, C.B., seconded the motion, which was carried unanimously. The total amount expended in prosecuting the investigations indicated during the year was £182, or about $910, and extended aid to twelve investigators.

The report of the Collective Investigation Committee, of which Prof. G. M. Humphrey, of Cambridge, is Chairman, was presented by Dr. Alfred Carpenter, and in moving the adoption of the report he said: "It would be the last general report. Special reports would only be continued until the work in hand had been completed." Dr. Cummings, of Belfast, seconded the motion, which was adopted. This completed the series of reports emanating from the Council, and although an attempt was made to move a resolution on some other subject, it was defeated by an adjournment to 8:30 P.M., when President Gairdner would deliver his address. Although this was the principal general business session for the present annual meeting, it continued only 1½ hours, and was attended by not more than 250 members. Neither the first general session nor any of the subsequent ones were opened by prayer. But as a part of the programme of this first day a special sermon was preached in the cathedral at 3:30 P.M. by the Very Rev. John Caird, D.D., LL.D., Principal and Vice-Chancellor of the University of Glasgow. Although the afternoon was rainy, the large cathedral was crowded, and the sermon was an eloquent and logical defense of the doctrine of spiritual existence as opposed to the prevalent materialistic tendencies of the present time. His text was found in Romans, chapter xi, verse 36: "Of Him and through Him and to Him are all things, to whom be glory forever." The grand old cathedral and the necropolis surrounding it, dating back many centuries, added much to the interest of the occasion.

At 8:30 P.M., the time to which the general morning session had adjourned, the large and elegant Bute Hall was thoroughly filled, embracing many not members of the Association. Dr. Bridgewater, President of the Council, occupied the Chair, and introduced President Gairdner, who was greeted with prolonged applause, on the subsidence of which he proceeded to deliver the Presidential Address. He first gave a brief history of the city of Glasgow and of the development of its commercial and educational interests, and then took up the leading topic of his address, viz.:— "The Physician as a Naturalist." He traced the words physician and physic back through many centuries, and in chaste and eloquent language claimed the true physician to be preëminently a student of nature in its broadest sense. He condemned in severe terms the past influence of theories or dogmas and creeds in both medicine and religion, in doing which he perhaps failed in some degree to maintain a just discrimination between the legitimate uses and the abuses of creeds of both classes. The address was listened to with profound attention, and called forth the most enthusiastic applause at its close. Sir Andrew Clark, in moving a vote of thanks, gave a brief but highly flattering history of Dr. Gairdner. The motion was seconded by the Lord Provost of the city, and was adopted with three ringing cheers. Without waiting for an adjournment the large audience dispersed, leaving not more than fifty or sixty members near the platform.

Dr. Edmund Waters, who had been cut off by the adjournment of the morning session, now brought forward the following proposition, viz.: "That the Council of the Association be desired to place before the General Medical Council the following resolution passed at the annual meeting held in Dublin in 1887, with the view of obtaining the opinion of the General Medical Council on the subject: 'That the Association is of opinion that the diplomates of the Irish and Scotch Universities and Corporations should possess the same privileges in respect of public appointments that are enjoyed by diplomates of the other divisions of the Kingdom.'"

After an animated discussion, the motion was carried by a large majority.

The second general session of the Association was commenced at 3 P.M. Wednesday in the Bute Hall, President Gairdner in the chair. He in a few appropriate words welcomed the foreign and colonial delegates. On motion of Dr. Thomas Bridgewater, President of the Council, Leeds was designated as the place for the next annual meeting, and Dr. C. G. Wheelhouse, of Leeds, was nominated as the President-elect. The Address in Medicine was then delivered by Dr. Clifford Allbut to a good audience, though the hall was not full. His subject was "The Classification of Diseases by means of Comparative Nosology." By comparative nosology he implied a description founded on the study of diseases as they affect different orders and species of living beings, from the lowest types to the highest or most complex, and also on the comparison of diseases as they affect different races of the human species.

Acknowledging that we had not the facts necessary for attempting a classification on the basis suggested, he proceeded to show that four methods of investigation were necessary for developing the facts desired, namely: *a*, concerning affinities and heredity; *b*, historical, relating to the origin of races and their influence on diseases; *c*, geographical, or the influence of environment; *d*, and the experimental, by which he meant a direct study, chemically and microscopically, of the morbid changes and products in all gradations of living matter. In directing attention to these several fields of inquiry Dr. Allbut presented some important facts and a greater number of interesting

suggestions, but pretty conclusively showed that many generations would yet pass before all the facts necessary for constructing a philosophical classification of diseases, founded on comparative nosology, would be at our command.

The address was listened to with much interest, and elicited a full measure of applause from the audience at its close. The usual vote of thanks was moved by Dr. McCall Anderson and cordially adopted by the audience. The chief part of the audience immediately dispersed, leaving only twenty-five to thirty members in the front seats or standing near by while Dr. W. H. Fitzpatrick moved "that every representative of the Branches attending a Council meeting be paid first-class railway fares to and from out of the funds of the Association." This led to a brief and not very orderly discussion, after which the session adjourned.

The third general meeting was held on Thursday, 9:30 A.M., in the Bute Hall, to hear the Address of Dr. William MacEwen, of Glasgow, "On Recent Investigations in Surgery of the Brain and Spinal Cord." The audience was large and was intensely interested in hearing Dr. MacEwen give an account of his own operative procedures involving the brain and spinal cord. As our present space will not permit us to give a proper analysis of this address, which was perhaps the most important one presented at this annual meeting of the Association, a more extended notice will be reserved for another occasion.

The fourth general meeting was held on the same day, at 3 P.M., in the Bute Hall, when the Address in Surgery was given by Sir G. B. Macleod, M.D., of Glasgow. He gave an interesting and well-written *résumé* of the advancements in the science and art of surgery during the reign of the present Queen, Victoria, *i. e.*, from 1837 to 1887. Being of a strictly historical nature, it naturally enough placed the achievements of Scotch surgeons in the foreground, and, though containing nothing not already well known to those familiar with medical literature, it was so well delivered that it commanded the full attention of the audience and received a most cordial vote of thanks, moved by Sir Spencer Wells and seconded by Dr. Teale, of Leeds.

The fifth and last general meeting was held on Friday, 2:30 P.M., in the Natural Philosophy Class-room instead of the Bute Hall, the President, Professor Gairdner, presiding. The Address in Physiology was given by John G. McKendrick, M.D., Professor of Physiology in the University of Glasgow. His subject was the "Problems of Respiration." He gave a most complete narrative of the progress of discovery relating to the function of respiration from the earliest periods to the present time, illustrating many points by experiments before the audience. Owing to the limited capacity of the class-room, not more than half of those who desired to do so were able to hear the address, which was one of the most interesting in the series given during the annual meeting. Professor Rutherford, of Edinburgh, moved the vote of thanks, and Professor Roy, of Cambridge, in seconding it, paid a high tribute of praise on the address. It was adopted with enthusiasm and, as on previous similar occasions, the audience immediately retired, leaving not more than ten or fifteen members in the room to attend to those items of business necessary for a final adjournment. *Sections.* Twelve Sections were instituted for this annual meeting, namely: Medicine, Surgery, Obstetric Medicine, Public Medicine, Psychology, Anatomy and Physiology, Pathology, Diseases of Children, Ophthalmology, Otology, Pharmacology and Therapeutics, and Laryngology and Rhinology; all of which were accommodated in the several class-rooms of the University. No Section work was done until Wednesday, the second day, from 10:30 A.M. to 2 P.M. The same time was occupied on Thursday, and on Friday from 10:30 A.M. to 1:30 P.M. Several important papers were read in different Sections and questions of much interest were discussed, but, as a rule, the attendance was small. Indeed, except in the first four Sections we have named, the number of members present at any one time was surprisingly small, for the most part varying from six to twenty-five. In the four exceptional Sections, *i. e.*, Medicine, Surgery, Public Medicine and Obstetric Medicine, the attendance in each varied at different times from 175 down to 25. The papers presented and the discussions elicited in the Section of Public Medicine contained many points of great interest to the citizens of Chicago as well as of all other cities in civilized countries. To some of these we shall have occasion to refer in more detail at another time.

The entertainments consisted of a conversazione given by the Principal and Professors of the Glasgow University in Bute Hall, on Wednesday evening, and another by the Lord Provost and Magistrates of the city, in the art galleries of the International Exposition, on Friday evening; a garden party by the President and Fellows of the Faculty of Physicians and Surgeons of Glasgow in the Botanic Gardens, on Friday from 4 to 6 P.M., to all of which the ladies were also invited. The usual annual dinner was served in St. Andrew's Hall on Thursday evening, and was attended by a large proportion of the members present at the meeting of the Association. As in previous years, each member paid for his ticket; those desiring wine paid one guinea, those desiring no wine paid 14s. The only difference in the tickets was, on the corner of the first was printed 1 guinea, and on the corner of the other 14s. The holders of each were freely intermingled at the table, only those paying for no wine needed no

wine-glasses at their plates. The dinner was served in excellent style and was accompanied by three kinds of very good music, namely: a band with instruments, one with bagpipes, and an orchestra of singers. The usual number of toasts and speeches closed the entertainment. During the latter part of the evening the spacious gallery was well filled with ladies. No less than eight excursions had been planned for Saturday to different points of historical interest, to any one of which members with their ladies could purchase tickets at reduced rates. The number of members registered as present at this annual meeting was quite equal to the average attendance on previous meetings, and in scientific and practical interest it was fully equal to the one held in Brighton in 1886, where the active workers were mostly English, while here the Scotch workers were equally predominant. The number registered as present from the United States was 21, several of whom participated in the work of some of the Sections.

Glasgow, August 14, 1888.

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Congress on Tuberculosis—Dangers of Tuberculous Animals—Tuberculous Meat and Milk—The Contagion of Tuberculosis—Surgical Treatment of Tuberculosis—Early Diagnosis of Tuberculosis—Tuberculosis of the Fowl.

The Congress on Tuberculosis which was lately held in Paris, is looked upon as a very great success, not that there was anything particularly new elicited from the works of the various speakers as a good deal that had been communicated had been known before, but yet it must have been a great satisfaction to the Congress to be enabled to confirm the views of such men as Morgagni, Andral, Laënnec, and others, who had foreseen the infectious nature of tuberculosis. The more recent researches of Professor Villemin and the still more recent discovery of Professor Koch render this point indisputable. M. Chauveau, Professor of Veterinary Medicine at Lyons, who presided over the meetings of the Congress, referred in his address to the researches and works of the School of that city by which the identity of human tuberculosis and bovine tuberculosis, as well as that of the tuberculosis of other animal species was demonstrated beyond doubt, and this transmissibility of the same malady from one species to another, is fertile in practical consequences. This is one reason why the Congress on Tuberculosis will mark in history the achievements of comparative pathology.

It is impossible for me in the limited space of a letter to give even a brief summary of the communications that were made to the Congress. I may, however, concisely refer to some of them. M. L. H. Petit, the General Secretary of the Congress, observed in his report, "that tuberculosis makes ravages, which are steadily on the increase, in Norway, in Greece, in Turkey, in Asia Minor, in North and South America, as well as in France. This fact excited alarm, a French savant took up the cause and at his suggestion the present Congress was organized, the invitation to which veterinarians and medical men from all parts of the world readily responded, and proved by their presence and communications the importance of the subject they had undertaken to elucidate." M. Petit added, "that it was gratifying to find that French science still had some credit out of France, and in fact the part which it can claim in the progress accomplished since the commencement of the century in this grave question of tuberculosis, is sufficiently great to have inspired confidence in our work in foreign parts as well as in France."

I may observe that none of the views now established on this malady had been neglected: bacteriology, pathological anatomy, physiology, clinical medicine and surgery, hygiene, sanitary police, have each in their turn contributed a precious contingent of documents. The veterinarians, in particular, have contributed in no small measure to elucidate by their very instructive communications the importance of comparative pathology and how the latter may with advantage be utilized in human medicine. They pointed out the dangers incurred by the employment of cow's milk in the bringing up of young children and of the blood which is freshly drawn from oxen and drunk at the slaughter house by anæmical ladies and girls. The members of the congress were unanimous in acknowledging that milk drawn from tuberculous cows should be looked upon with some misgiving, as it is considered virulent and an excellent vehicle for the tubercle bacilli. A great number of cows healthy in appearance are tuberculous. Their milk, their muscular fibre contain bacilli in the proportion of four to sixteen animals given up to the butcher.

M. Nocard, Professor of Veterinary Medicine at Alfort, dwelt on the dangers to which one is exposed by the use of the flesh and milk of tuberculous animals. He stated that it has been urged that if an animal presented tuberculosis in any organ the animal should be seized and considered unfit for food. M. Nocard, however, thought that this radical measure was unnecessary, as one can eat without fear the flesh of tuberculous animals the tubercles of which are limited to the viscera. Even the flesh of animals the tuberculosis of which is generalized would be but exceptionally to be dreaded. At the debate that followed, a large number of the members present did not agree with M. Nocard, and affirmed that the use of the meat, and particularly the milk of tuberculous animals is dangerous. They therefore pro-

posed the complete seizure of the meat of all tuberculous animals instead of the partial seizure which M. Nocard judges sufficient. To exemplify how one may be deceived by external appearances as to whether a cow or an ox may be affected with tuberculosis, and how absolutely impossible it was to affirm before the autopsy whether or not an animal was tuberculous, one of the members recalled that on a Shrove Tuesday, on which occasion a fattened ox is paraded about the streets, presented, after being slaughtered, the most indisputable characters of tuberculosis.

The danger of the use of raw meat which is so much in vogue is sufficiently obvious. The same may be said of raw milk, and the danger attending both may be obviated by simply subjecting them to cooking or boiling. When the milk cannot be boiled, goat's milk should be used instead, as these animals are seldom or never affected with tuberculosis. The same may be said of asses milk.

Professor Cornil has demonstrated, by some interesting experiments, that the contagion of tuberculosis may be effected through the mucous membrane, and by another series of experiments on guinea pigs, he was led to the conclusion that tuberculous inoculation may be effected in sexual intercourse. When the question of infantile polyadenopathy, introduced by Dr. Legroux, of Paris, was being discussed, Dr. Daremberg observed that he had met with several cases of this specific adenopathy concurrently with infectious tuberculous tonsillitis. Children, he remarked, easily contracted this latter affection from their tuberculous parents by their cohabitation with them and also by the act of being kissed by them.

With regard to the surgical therapeutics of tuberculous affections, Dr. Vargas passed in review all the surgical methods directed against tuberculous affections in various parts of the body. In Spain, he said, surgery tended to active measures and to pursue local tuberculoses wherever they originated, even if it were in the brain or lungs.

Dr. Espina y Capo, of Madrid, made a communication on the signs of the early diagnosis of tuberculosis in man. He attributes great importance to the measurements of the chest. When the intermammary space does not exceed 17 or 18 centimetres, when the axillary index does not exceed 72 centimetres, there are great chances that one has not to do with pulmonary tuberculosis. It was generally supposed that tuberculosis may be communicated through the flesh of the common fowl. Dr. Strauss, Professor of Comparative Pathology, at one of the meetings of the Congress made, in presence of the members, an autopsy of two fowls which had ingested, the one during one year, the other for eight months, 50 and 28 kilogrammes respectively of tuberculous sputa, neither the one nor the other presented the least tuberculous lesion, which would prove the very great power of resistance of the gallinacæ to tuberculous infection.

The Congress concluded its meetings on July 31st, but before doing so the following propositions were voted: 1. All meat from tuberculous animals should be seized. 2. Instructions should be issued to all communes pointing out the dangers of contagion, the precautions to be taken against contagious maladies, against suspicious aliments, etc. 3. A regular system of inspection of dairies should be organized. The President then declared the Congress closed, and announced that the next Congress on tuberculosis will meet in two years. A. B.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the Fifth District Branch—Tumor, Enclosed in a Membranous Sac, of the Internal Os Uteri—Rupture of the Diaphragm—St. John's Guild Seaside Hospital.

The summer meeting of the Fifth District Branch of the New York State Medical Association was held this year at Babylon, Long Island, the principal town on the Great South Bay, that famous resort of perennial delights to all devotees of sailing, fishing and shooting. The meeting was a pleasant and successful one, though the attendance was not as large as at some of the other gatherings of the Branch; and among the papers read were one on Heart Lesions and Albuminuria, by Dr. J. G. Truax, of New York, and the report of the Removal of a Tumor Enclosed in a Membranous Sac from the Intestinal Os Uteri, by Dr. William Govan, of Stony Point, Rockland County.

In Dr. Govan's case the patient was a married lady 48 years of age, and the mother of six children, who for nearly four years had been confined to bed on account of constant flooding and the debility resulting from these repeated hæmorrhages. In addition, she was suffering from chronic malarial fever. For about two years she had considerable pain and bearing down, and one year after this had commenced a tumor was discovered protruding from the uterus into the vagina; while six months before she was seen by Dr. Govan the tumor, after a movement of the bowels, had protruded from the vulva. On account of the extremely weak and nervous condition of the patient, no satisfactory examination could at first be made. The pulse was 90, and the temperature 102°, and the pain in the lower part of the abdomen so severe that she would not allow herself to be touched. After a few days of supporting and antipyretic treatment, however, an anæsthetic

was administered and a thorough physical examination made. A tumor was found completely filling the vagina, and this was ascertained to consist of a shining mass as large as a child's head at birth, and with a neck attached quite high up in the cervix uteri.

With the assistance of the attending physician, Dr. Govan made an incision with a serrated spoon, as far up as possible around the pedicle, and pushed the chain of an écraseur close up to the attachment of the tumor. The chain having twice broken, he drew the tumor outside of the vulva with a tenaculum, when he found that he had to deal with a membranous sac containing a large hard substance. With the serrated spoon he then cut through the neck of the sac as far up inside the os as he could reach; upon which a large quantity of fluid escaped, and with it a hard tumor about the size and shape of a large turnip, no doubt a myoma. In order to prevent hæmorrhage the vagina was packed with small sponges saturated with a solution of persulphate of iron, and on visiting the patient the next day he found her in excellent condition, no hæmorrhage whatever having occurred. Since the operation, which was performed October 17, 1887, there has been no return of the flooding, and under appropriate tonic treatment the lady has completely regained her health. It was, therefore, a case of long-standing and much suffering, followed by a rapid recovery. In the discussion on the paper Dr. Truax related a similar case occurring in his hospital practice.

Dr. N. W. Leighton presented the report of a case of *Ruptured Diaphragm, with Death by Apnœa*. The patient, a lady 28 years of age, to whom he was called in haste, was found to be suffering from severe pain in the epigastrium, nausea and dyspnœa, while her face wore an anxious expression. He learned that she was in her usual health in the morning, had been to church, and afterwards eaten her dinner, a part of which consisted of fried scollops. Supposing that she was suffering from colic in consequence of embarrassed digestion, he ordered some powdered ipecac in a goblet of water, but the patient was apparently unable to swallow it. Thinking that the taste of the ipecac probably aggravated the nausea and increased the difficulty of swallowing, he tried soda in warm water, peppermint and clear warm water; but with the same result. Believing that the dyspnœa was due to gaseous distension of the stomach, and the dysphagia and other nervous manifestations to hysteria, he left the house for a short time, urging the friends of the patient to persist in having her try to swallow.

Dr. Leighton returned in less than half an hour, prepared to administer ether for the relief of the pain and to induce emesis; but, to his surprise, he found his patient dead. He demanded a post-mortem examination, refusing to give a certificate without it. The autopsy was made about twenty-four hours after death, when an opening was found in the diaphragm, on the left side, through which the stomach and the spleen had entered the left thoracic cavity. The stomach was distended, filling the entire cavity except the spaces occupied by the spleen below and the left lung above, where it was compressed into a mass about the size of a large orange. The walls of the stomach were tense by the pressure of gas within them, and the organ also contained the partially digested meal taken a few hours before death. The heart was pushed to the right of the median line.

The opening through the diaphragm was sufficiently large to admit four fingers into it, side by side. The edges of the ruptured muscle were thickened and rounded, as if cicatrization had occurred a long time before the date of the fatal occurrence; and the hypertrophied margins showed the effort of nature towards compensation for the rupture. The information was elicited from the lady's husband after the examination that she had had a very severe labor about seven years before, and that during the last pains she called out that she "felt something give way." Since that time he said she had had numerous attacks of colic and indigestion with nausea, but was never able to vomit. She was never again pregnant.

It was the conclusion of Dr. Leighton, as well as other medical men present at the autopsy, that the rupture of the diaphragm had originally occurred during the parturition referred to; although it had not appeared to give rise subsequently to any great inconvenience, except the inability to evacuate the stomach when nausea and embarrassed digestion required it. During the fatal attack it was believed that the stomach, by the movements incident to its gaseous distension, was forced through the ruptured diaphragm, and then continued to expand till it forced the diaphragm downward, dragged the spleen into the thoracic cavity, pushed the heart to the right of the median line, and expelled all the air from the left lung. In conclusion Dr. Leighton said that he was not prepared to state to what extent the displacement of the organs took place at death; but there was no doubt in his mind about the entrance of the stomach into the thorax after the patient's last dinner and before her death.

Before the meeting adjourned Dr. E. H. Squibb, of Brooklyn, the Secretary of the Branch, said that it had been hoped to hear read a full report of a case of hydrophobia treated at a Brooklyn hospital last winter; but as the post-mortem examination of the spinal cord had not yet been quite completed, it was thought best to postpone the report until a future meeting, when all the particulars of the case could be presented.

The new wing of the St. John's Guild Seaside Hospital at Cedar Grove, Staten Island, was re-

cently opened with appropriate ceremonies. Almost a hundred invited guests who were present on this occasion went down to the Island on board the floating hospital of the Guild, where they had full opportunity of observing its beneficent work among the sick children of the poor. On behalf of the Hospital Committee Dr. Charles A. Leale formally presented the new wing, which was received by the Guild through its President, Wm. H. Wiley, Esq.; after which remarks were made by other officers of the Guild and by Dr. Moreau Morris, Chief Inspector of the Board of Health's summer corps of physicians, whose work among the tenement houses is so nobly supplemented by that of the Guild. The new wing of the Seaside Hospital, which is now fully equipped for service, is 100 feet long and 25 feet in width, and contains sixty-four cots. This increases the hospital's capacity one-half, so that 205 mothers and children can be received at a time; making the institution the largest of its kind in the world. P. B. P.

The Dinner at the Congress of Physicians and Surgeons.

Dear Sir:—Some complaints having reached the Committee in regard to the distribution of invitations to the dinner to be given to the foreign guests of the Congress of Physicians and Surgeons to be held in this city next month, I must beg the use of your columns to say that this distribution was in my hands.

The Council of the Congress having expressed themselves as averse to any elaborate entertainment on the part of the Congress, it may be said in the first place, that this dinner is *unofficial*, and is in the hands of the *members* of the Committee and not of the Committee.

As it was necessary, after the matter was decided upon, to act quickly, in order that proper invitations might be sent to Europe and answered in time, it was not possible to arrange this distribution so methodically as might have been done had the time been longer. It was intended that every member of the Congress; that is, every member of any of the constituent Associations, should have an opportunity to subscribe.

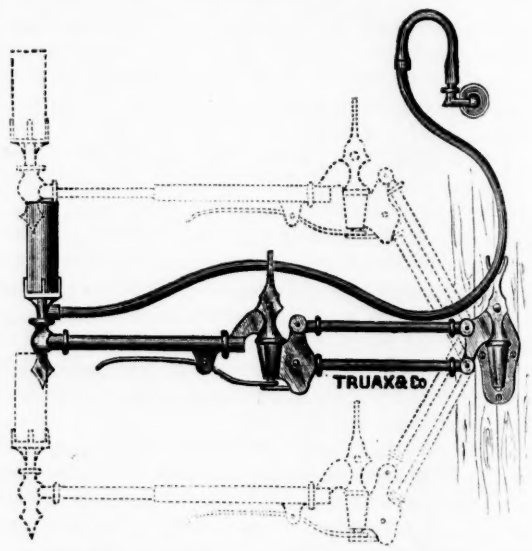
Some circulars were sent directly by me and some of them by such representatives of the Associations as I could most readily get at. It is possible that there may have been accidental omissions, and it is more than possible at this season, when so many gentlemen are absent from home, that some invitations have gone astray. Another possibility, which we know to have been in some cases an absolute fact, is that circulars have been placed in the waste paper basket. This note is intended as an invitation to every member of all the Associations composing the Congress of American Physicians and Surgeons, who wishes to do so, to send his subscription of $20 to Dr. S. C. Busey, 1545 I St. N. W., Washington, D.C., for a dinner to be given at Willard's Hotel, in this city, on Monday, September 17, at 7:30 P.M. I am very respectfully, ROBERT T. EDES.

Washington, August 21, 1888.

NEW INSTRUMENTS.

A NEW ADJUSTABLE LAMP-BRACKET FOR PHYSICIANS.

BY S. S. BISHOP, M.D.,
OF CHICAGO, ILL.



The accompanying cut illustrates the working of an adjustable lamp-bracket I have designed for the use of physicians, especially adapted for eye, ear, nose and throat treatment. It overcomes the difficulty of properly illuminating these parts from any desired direction, and at any given angle. The lamp is easily adjustable to any point lying within a perpendicular line eighteen inches in length, and it will swing through the arc of a circle, having a radius of three feet. It is supplied with joints, parallel arms and an extensible lamp holder in such a manner as to place the lamp either within a few inches of any wall to which it is attached, or at any intermediate point to a distance of three feet from the wall. It is so constructed that, in order to raise or lower the light, you need only to press the thumb and finger on the extension arm and brake beneath so as to close them together; then set the lamp at the desired point; release the brake, and the light remains wherever it is placed. The brake sets automatically, without a jerk, and without loss of motion. These points will be appreciated

by those who have to use light concentrators on the imperfect brackets now in use.

The lamp holder is prepared to receive an argand burner connected with a flexible gas tube, so that the bracket may be attached to a wall or desk in any part of an office or house, and connected with the gas fixtures like an ordinary drop lamp. Or, where there is no gas, a kerosene lamp holder is screwed on instead of a gas burner, and an oil lamp of large size may be used to obtain brilliant illumination. The bracket is strong enough to support a weight of five pounds or more. Its utility can be extended by substituting a tray for the lamp receiver, so as to make it a convenient instrument holder for surgeons and dentists alike. I have employed this bracket in my office a sufficient length of time to demonstrate its superiority over any other that I have been able to find after a most exhaustive search.

719 W. Adams St.

BOOK REVIEWS.

THE PHYSICIANS' LIESURE LIBRARY. ABDOMINAL SURGERY. By HAL C. WYMAN, M.S., M.D., Professor of Surgery and Operative Surgery, Michigan College of Medicine, etc., 8vo, paper, pp. 87. Detroit: George S. Davis. 1888. Chicago: W. T. Keener. Price 25 cts.

In this little book may be found a clear and concise presentation of the present status of elementary and experimental abdominal surgery, and one will not be less interested in this handbook because of having read a more pretentious volume.

We particularly commend to the attention of the student and practitioner the following, from the preface of the book: "How then, can a student not in reach of hospitals and an abundance of opportunities and materials, attain that degree of knowledge which shall give him that confidence so necessary to the conscientious, good surgeon.

"He must do it by providing his own opportunities and material.

"Where can the necessary material be obtained?

"For answer, I say, search the kennels and the hutches about you. Hunt up those oft tried, faithful and most efficient martyrs who give their lives to the cause of science—the dogs and rabbits.

"Vincent Boune's *Epitaphium in Canem* ought to be read and appreciated by every one who undertakes a vivisection.

"Dogs have rendered inestimable aid in evolving the numerous great surgical discoveries which have added so much to the years and comfort of mankind. With the aid of dogs hundreds of ambitious, enthusiastic surgeons have been enabled to make successfully the studies necessary for an understanding of the means by which nature repairs damage."

There are many men that would gladly do experimental surgical work if they knew how to begin. They can learn not only the beginning but the whole subject of experimental abdominal surgery from this book.

THE SOUTHERN CATTLE PLAGUE (Texas Fever) of the United States, with especial Reference to its Resemblance to Yellow Fever. An Etiological Study. By FRANK S. BILLINGS, Director of the Patho-Biological Laboratory of the State University of Nebraska. 8vo, pp. 141. Lincoln, Neb.: Journal Company, State Printers. 1888.

After a scathing (*sic*) criticism of the definitions of Southern cattle plague of Mr. John Gamgee and Mr. D. E. Salmon, Dr. Billings says: "The only logical conclusion as to this disease is, that it is an *Extra-Organismal-Infectious-Septicæmia*." Dr. Billings claims to have discovered the true germ of the disease, and has a very pretty colored plate of their appearance in the blood. Preliminary to his description of it, however, he wanders off into a page of rather spread-eagle praise of Nebraska and its State University. Every one knows that the West, particularly Nebraska, is moving, and no one is at all inclined to doubt it until the assertions of the fact are unnecessarily repeated. But to return, Dr. Billings thinks, too, that he has discovered the germ of yellow fever, "though my proof is largely of an *a priori* nature." The *a priori* proof was the finding, in some pieces of liver and kidney from a case of yellow fever, organisms "belonging to the same ovoid belted group of organisms" found in cattle plague.

The author adduces practical evidence that the manure must be the chief medium by which infection of the land occurs, and that Southern cattle plague is produced by inoculation with a pure cultivation of its micro-organism. In regard to prophylaxis against the disease Dr. Billings proposes quarantining the Southern cattle until they shall be no longer disease-producing elements, and disinfecting cattle cars whenever they have been used. He thinks there is no question that the disease can be prevented by inoculation.

Altogether, the little book is a curious example of a record of what seems to have been good work, almost buried in verbosity. It contains 138 pages of reading matter; it would be much more readable, and far better as a scientific communication, did it contain only 60 or 70 pages at most. The profusion of unnecessary words is all the more objectionable because they are used in what sinks almost to personal abuse of workers in the same field. The book is dedicated "To Rudolph Virchow, Teacher, Friend, and Master, in whose footsteps I am but an humble follower."

Can imagination picture Virchow making a quotation in a report, and expressing disapproval by "The above is all bosh?" We doubt if Virchow has left footsteps, for any one to follow, in which he shows absolute intolerance and sinks almost to personal abuse of one holding an opinion opposed to his. Dr. Billings has a great field in which to work, and we have no doubt that he will take advantage of his opportunities; we hope, meanwhile, that a more tolerant and scientific spirit will pervade his future writings.

A SYSTEM OF OBSTETRICS. By American Authors. Edited by BARTON COOKE HIRST. Volume 1, 8vo, pp. xiv—808. With a colored Plate and 309 Engravings on wood. Philadelphia: Lea Brothers & Co. 1888.

There can be but little doubt that this work will find the same favor with the profession that has been accorded the "System of Medicine, by American Authors," and the "System of Gynecology," all from the well-known house of Lea Brothers & Co.

This volume contains eight articles—we may say monographs, the first being on the "History of Obstetrics," by Dr. George J. Engelmann, who has already added so much to the history of this department. In regard to the "Physiology and Histology of Ovulation, Menstruation, and Fertilization: the Development of the Embyro," we find the first example of the treatment of this branch of obstetrics, in an obstetrical work, by a physiologist. The reader will scarcely need to be told anything of the character of this paper when it is said that the author is Dr. H. Newell Martin, of Johns Hopkins University. In a paper of 122 pages the editor of the work discusses "The Fœtus: its Development, Anomalies, Monstrosities, Diseases, and Premature Expulsion," abortion, miscarriage, and premature expulsion taking up 22 pages of this paper. Dr. W. W. Jaggard contributes the article on "Pregnancy: its Physiology, Pathology, Signs, and Differential Diagnosis." The "Conduct of Labor, and the Treatment of the Puerperal State" are discussed by Dr. Samuel C. Busey, the "Mechanism of Labor, and the Treatment of Labor based on the Mechanism" by Dr. R. A. F. Penrose, the "Use of Anæsthetics in Labor" by Dr. J. C. Reeve, and the "Anomalies of the Forces in Labor" by Dr. Theophilus Parvin.

One is at a loss to know what to say of this volume, for fear that just and merited praise may be mistaken for flattery. The subjects of some of the papers are discussed in various works on obstetrics, though not to that full extent that is found in this volume. The papers of Drs. Engelmann, Martin, Hirst, and Jaggard, however, and that of Dr. Reeve, are incomparably beyond anything that can be found in obstetrical works. Certainly the editor may be congratulated for having made such a wise selection of his contributors, and the profession may be congratulated that the editor did not assign the subject of his paper to some one else.

DISSOLUTION AND EVOLUTION AND THE SCIENCE OF MEDICINE: An Attempt to Coördinate the necessary facts of Pathology and to establish the first principles of Treatment. By C. PITFIELD MITCHELL, M.R.C.S., England, etc. 8vo, pp. xvi, 246. London: Longmans, Green & Co. 1888. Chicago: W. T. Keener.

As we have said before, though the remark is not original with us, what is worth doing at all is worth doing well. A book that is worth the printing is worthy of an index, and it is difficult to conceive how any author or any publisher can issue a scientific work without an index, nor do we know of any excuse that can justify such negligence.

Mr. Mitchell is a follower of Mr. Herbert Spencer. One that has read Mr. Spencer's "Synthetic Philosophy," and every one that has not should do so, knows that its sustaining elements are the doctrines of evolution and dissolution. The design of Mr. Mitchell's work "is to inquire whether these may not be made fertilizing principles for large collections of the data of pathology, and thus the means of practice for the physician and surgeon."

To give a meagre idea of the scope of the work in our limited space, it may be explained that the author discusses inflammation and suppuration as dissolutional changes, resolution and repair as evolutional changes, retrograde metamorphoses as dissolutional changes, the changes induced by animal and vegetable parasites as exemplifying dissolution, neoplasms as exemplifying evolution. Among special diseases acute and chronic Bright's disease, hepatic cirrhosis, and pulmonary inflammations are discussed, as well as locomotor ataxia and other disorders of the nervous system, the fevers, diabetes and allied affections, and diseases of the mind.

To get a further idea of the scope of the book one must read it; and if he cannot agree with all that the author says, he will have at least been interested and become the possessor of many new ideas.

The Physicians' Leisure Library. DISORDERS OF MENSTRUATION. By EDWARD W. JENKS, M.D., LL.D., Professor of Gynecology in the Michigan College of Medicine and Surgery. 8vo, pp. 120. Detroit: George S. Davis. 1888. Chicago: W. T. Keener. Paper, 25 cents.

A very good account of the disorders of menstruation, illustrated. The size and make-up of the numbers of the "Leisure Library" make them very convenient, and their price places a whole series easily within the reach of every one.

MISCELLANEOUS.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—In view of the fact that frequent inquiries are made of the Committee of Arrangements by medical men and others in regard to the character of the organization now known as The Congress of American Physicians and Surgeons, which will hold its first triennial session in Washington, September 18, 19, and 20, it may be proper to state that several years ago the American Surgical Association passed a series of resolutions declaring it expedient that the special medical societies in this country should adopt some plan of organization by which they should be brought together at certain stated periods, and invited the other societies to coöperate with it in perfecting such a scheme. This invitation was accepted by the several societies, and in October, 1887, a committee of conference, composed of delegates from each of the societies, assembled in this city and agreed upon a plan of association, which was subsequently considered and accepted by the societies constituting the Congress as now organized. This plan consists simply of the agreement that the medical societies named shall hold their usual annual meetings at the same time in this city every third year, and that an executive committee, composed of one member of each society accepting the agreement, shall arrange for one or more general meetings for the consideration of such medical subjects by such physicians and surgeons as it may select, to be followed by such general discussion as time may permit. The present Executive Committee is also charged with the duty of devising and submitting a plan of permanent organization, which will be considered at a preliminary meeting on Tuesday morning, September 18. There is no membership in the Congress proper. Membership belongs exclusively to the several societies constituting the Congress. Each society prescribes its rules for admission of candidates, and transacts its business according to its own method. The Congress, as such, does not in any manner interfere with the autonomy of the several constituent societies.

The guests are men of distinction in some special department of medical science, who have been invited by some one of its constituent societies to attend its meetings, and perhaps to present a paper on some chosen subject. They are guests of a society, not of individual members. The Committee of Arrangements has not claimed or exercised the privilege of naming guests, nor has it conceded the privilege to individual members. At its suggestion the Executive Committee has invited the heads of the Government Bureaux of Medicine, the president of the last International Congress, and several citizens to whom it was indebted for courtesies. In the event there should be present from abroad any medical man, who may not have been specially invited, the Committee will hold itself bound by ordinary courtesy to include him in the list of guests.

The meetings of the Congress and of the societies will be open to the profession. Any medical man who may choose to attend has the privilege of doing so; but the privilege of taking part in the discussions will be limited to the members, guests, and those who may be invited to do so by the societies respectively. The invitation to attend the meetings and engage in discussion, will not, however, entitle one to the privileges of a guest.

Members and visitors must avail themselves of the ordinary excursion rates of railroad fare.

The Postmaster of this city has arranged facilities for the distribution of mail at the office of registration, in Willard's Hotel. Letters must be addressed to "The Congress of American Physicians and Surgeons."

It may be added that the Committee of Arrangements declines to make any provision for, or to have anything to do with, any exhibit of pharmaceutical preparations and medical and surgical appliances.

I assume the responsibility of making the foregoing statement for the information of those concerned, and to avoid confusion and misunderstanding. And it gives me great pleasure to announce that the meeting in every aspect promises to be a conspicuous success.

SAMUEL C. BUSEY, M.D.,
Chairman Committee of Arrangements.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION will meet in Pickwick Theatre, Jefferson and Washington Aves., in St. Louis, September 25, 26 and 27, 1888, two weeks later than first announced. This date was selected in order that that the cheap railway rates during the Carnival season of St. Louis might be made available. The programme is perfected, and the entire length of the meetings from 9:30 A.M. to 5:30 P.M. each day will be taken up with strong papers, and full and free discussions, there being nothing in the way of extraordinary or irrelevant business, all such matters being settled by committees, without discussion. The three evenings will be consumed by public and private entertainments, and each and every delegate may be assured that constant efforts will be made in the direction of catering to his comfort and enjoyment.

The sentiment animating the Committee of Arrangements and officers of the Association in planning this meeting has been to provide for good, solid scientific work while the sun shines, and at night let recreative effort and pleasure reign. All physicians west of the Alleghany Mountains are invited to become members, eligible to membership under the following from the Constitution:

ART. III. Membership in this Association shall be limited to those members of the profession of medicine who acknowledge allegiance to the American Medical Association by signing its Code of Ethics. No individual who shall be under sentence of expulsion, suspension or disability, from any recognized State, County, District or Local Medical Society, shall be eligible to membership in this Association until said disability shall have been removed. All applications for membership shall be referred to the Committee on Credentials. The annual dues shall be $3, payable in advance.

For further information, address I. N. Love, M.D., Chairman Committee of Arrangements, Lindell and Grand Aves., St. Louis.

N. B. Kindly inform us prior to September 24 whether or not you can attend. Be sure and secure receipt from local Ticket Agent for full fare paid.

AN ACCIDENT FROM CARELESSNESS.—A very serious accident occurred in Topeka, Kansas, on August 14, by which Dr. Detlor, a veterinary surgeon, was seriously injured. He had undertaken to pulverize nitrate of potassium and sulphur in an *iron* mortar with an *iron* pestle! The Topeka *Commonwealth* gives the following account:

"There was a violent explosion, flame and smoke filled the air, and small bits of iron flew like hail in every direction. These pierced the skin of those who stood abont, went into the walls of the office and out through the window, and one piece even struck through a board partition, struck a horse on the opposite side in the hock joint and inflicted a serious wound. The windows were crushed like an egg-shell, the electric lamps and telephone wires were destroyed, and in short the entire contents of the room, including books, papers, medicines, and clothing, were torn, burned, smashed, and mixed up in one indescribable mass, which was made ghastly by a sprinkling of shreds of flesh, pieces of bone, parts of fingers, and every horrible evidence that some one had suffered severely by the explosion. The chief victim was Dr. Detlor. There were several others who suffered from the effects of the explosion, but in a less degree, and some of them very seriously. One of these was Dr. E. D. Shevalier, of Cortlandt, N. Y., who came to Topeka about six months ago, and was practicing with Dr. Detlor. A piece of the iron mortar passed through his left arm, inflicting an ugly and painful but not dangerous wound. F. M. Hopkins,

a student who had been with Dr. Detlor about a year, had his clothing torn from his body, and received some slight scratches. The office in which the explosion occurred was a total wreck."

EFFECT OF NUTRITION UPON THE FUNCTIONS OF THE ORGANS.—The *Kölnische Zeitung* tells how, at a recent review of Russian troops which took place at night, great confusion was caused by inability of large numbers of the soldiers to see, although the light was sufficient for a person of ordinary vision to distinguish even the minutest objects at some distance. Dr. Meissner investigated the matter and demonstrated that the whole cause of the trouble was insufficient nutrition. The review occurred during the Greek fast, when the faithful eat no animal food. Soon after resumption of the usual diet the vision became normal. This disturbance occurs sometimes in insufficiently-fed nursing women.—*National Druggist.*

DR. LEVI J. ALLEMAN died at his home in Boone, Iowa, August 26, 1888, aged 46 years. Dr. Alleman was born in Fayette, N. Y., graduated at the University of New York in 1863, and at once entered the Army as Asst. Surgeon of the First New York Veteran Cavalry. He served during the remainder of the war and was mustered out with his regiment in September, 1865. He settled in Boone, Iowa, immediately after leaving the service, and remained there to the time of his death. His death was due to Bright's disease. He was a member of the American Medical Association.

WATER-PURIFICATION BY LIME.—A man living in the shade of the Catskill Mountains has entered upon a new branch of business. He heard that well water could be purified with lime, so he emptied a bushel and a half into his well and felt blissful and happy. It turned out that, because of the dryness of the season, there was only three feet of water in the well, and ever since his experiment he has been selling a good article of whitewash to his neighbors at two buckets for a cent, and walking a mile and a half to the creek for drinking water for his family. —*New York Graphic.*

DR. THOMAS TAUNTON SABINE, late Professor of Anatomy in the College of Physicians and Surgeons of New York, died on August 23, aged 47 years. As a teacher of Anatomy Dr. Sabine probably had no superior and but few equals in America. As a surgeon he was very successful, being connected with several of the hospitals of New York.

EPIDEMICS AND NEGLECT.—The *Sanitary News* says: There has not been a single epidemic this summer that was not directly traceable to neglect of ordinary sanitary requirements.

PROFESSOR VON ESMARCH, of the University of Kiel, an uncle, by marriage, of the Emperor William II, is in America, having come to attend the Congress of American Physicians and Surgeons at Washington.

DR. GEORGE T. KEMP, late Fellow of Johns Hopkins University has been appointed Associate in Biology and Physiology in the Hoagland Laboratory, Brooklyn.

DR. W. L. BALDWIN, one of the best-known physicians of Jacksonville, Fla., died of yellow fever on September 3. He was a graduate of Albany Medical College, in 1863.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department U. S. Army, from August 25, 1888, to August 31, 1888.

Lieut.-Col. Richard H. Alexander, Surgeon, detailed a member of Board to meet at San Carlos, A. T., August 28, to select a site for a new post at that place Par. 1, S. O. 44, Div. Pacific, August 15, 1888.

Major Chas. H. Alden, Surgeon, detailed as a member of the Board of medical officers convened at U. S. Military Academy, West Point, N. Y., vice Major Charles R. Greenleaf, Surgeon, relieved. Par. 2, S. O. 199, A. G. O., August 28, 1888.

Major Daniel G. Caldwell, Surgeon, to report to the Recorder of the Retiring Board in session at Ft. Leavenworth, Kan., as a witness in the case of Capt. Thomas Sharp, Seventeenth Infantry. Par. 2, S. O. 74, Dept. Platte, August 18, 1888.

Major Daniel G. Caldwell, Surgeon, having completed his duty as witness before Retiring Board, Ft. Leavenworth, Kan., to return to his station, Ft. D. A. Russell, Wyo. Par. 4, S. O. 106, Dept. of the Missouri, August 24, 1888.

Asst. Surgeon Leonard Y. Loring, granted leave of absence for one month. Par. 1, S. O. 97, Dept. of Ariz., August 23, 1888.

Capt. Marcus E. Taylor, Asst. Surgeon, granted leave of absence for four months, to take effect about October 15, 1888. Par. 8, S. O. 196, A. G. O., August 24, 1888.

Capt. Henry T. Birmingham, Asst. Surgeon, relieved from duty at Ft. Myer, Va., and ordered to Ft. Klamath, Ore., for duty. Par. 18, S. O. 196, A. G. O., August 24, 1888.

Asst. Surgeon R. R. Ball, U. S. Army, Ft. Riley, Kan., ordered to Ft. Lewis, Col., for temporary duty. Par 5, S. O. 108, Dept. of the Missouri, August 27, 1888.

Asst. Surgeon Eugene L. Swift, upon being relieved from temporary duty at Ft. Klamath, Ore., to return to his proper station, Ft. Spokane, W. T. Par. 18, S. O, 196, A. G. O., August 24, 1888.

Asst. Surgeon Ogden Rafferty, to proceed from Ft. Clark to the camp at the Dept. rifle range near San Antonio, Tex., and report for temporary duty. Par. 3, S. O. 85, Dept. of Texas, August 15, 1888.

Asst. Surgeon Ogden Rafferty, upon conclusion of Dept. rifle competition will report to the Inspector of rifle practice, Div. of the Missouri, for assignment to duty in connection with the Div. rifle competition as camp surgeon. Par. 4, S. O. 86, Dept. of Tex., August 17, 1888.

Official List of Changes in the Medical Corps of the U. S Navy for the Week Ending September 1, 1888.

Asst. Surgeon R. P. Crandall, detached from the "Saratoga" and wait orders.

P. A. Surgeon W. R. DuBose, detached from the "Jamestown" and to the "Constellation."

W. F. Arnold, Nashville, Tenn., commissioned Asst. Surgeon in the Navy August 18.

George A. Lung, Canandaigua, N. Y., commissioned Asst. Surgeon in the Navy August 18.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, for the Two Weeks Ending August 27, 1888.

Surgeon H. W. Sawtelle, directed to proceed to San Diego, Cal., and inspect Service at said station. August 17, 1888.

Surgeon W. H. H. Hutton, to proceed to Way Cross, Ga., and assume charge of inspection and fumigation stations. August 18, 1888.

P. A. Surgeon F. M. Urquhart, to report to Surgeon Hutton for special duty. August 19, 1888.

Asst. Surgeon H. D. Geddings, appointed an Asst. Surgeon August 18, 1888. To report to Surgeon Hutton for special duty. August 19, 1888.

Asst. Surgeon C. P. Wertenbaker, appointed an Asst. Surgeon August 18, 1888. Assigned to duty at the port of Norfolk, Va., August 20, 1888.

Asst. Surgeon J. B. Stoner, to proceed to Charleston, S. C., for temporary duty. August 20, 1888.

P. A. Surgeon John Guitéras, to proceed to St. Mary's River, Fla., establish and take command of refuge camp at that point. The camp to be known as Camp Perry. August 22, 1888.